

The 18th Biennial Conference Of The Estuarine Research Federation  
**ERF 2005 October 16-20, 2005 Norfolk, Virginia**

# CONFERENCE PROGRAM



**estuarine interactions:**  
biological-physical feedbacks and adaptations

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# **Thank You!**

## **To the ERF 2005 Sponsors and Contributors**

The Estuarine Research Federation is grateful to the sponsors and contributors who have stepped forward to support the 2005 biennial conference through funds or significant in-kind services. Their support testifies to the importance and relevance of the conference and to the generosity of the estuarine and coastal sciences community.

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· Coastal Resources Management PhD Program

· Biology Department

Chesapeake Bay Program of Virginia,  
Department of Environmental Quality

Hampton University, Marine and  
Environmental Science

Rite-in-the-Rain

# Welcome to the 18<sup>th</sup> International Conference

## On behalf of the ERF 2005 Organizing Committee, Welcome to ERF 2005 and Norfolk, Virginia!

The Organizing Committee and I are delighted with the enthusiastic response to the conference from ERF and Chesapeake Research Consortium members, as well as many others. We believe you will find an exceptional range of scientific papers and posters and will have the opportunity to interact with colleagues and new acquaintances. Those of us who live along the mid-Atlantic coast are thrilled at the chance to introduce and reintroduce so many of you to our historic region. I hope you will take the opportunity to enjoy scenic Chesapeake Bay and its beaches, the beauty of the most pristine barrier islands along the Atlantic Coast, and the wide range of wetland types through our field trips, and perhaps explore some of the Nation's early history and culture on your own as well.

The conference theme is *Estuarine Interactions: Biological - Physical Feedbacks and Adaptations*. We chose this theme because it reflects the long history of interaction among the physical and biological coastal sciences in the mid-Atlantic. This theme also represents an important key to understanding the causes that lead to the formation and evolution of coastal environments and for assessing the impact of human activities and climate change on coastlines. The theme also is central to Chesapeake Bay restoration efforts. To that end, we are delighted that the Chesapeake Research Consortium (CRC) is meeting jointly with ERF 2005. Many of the presentations and posters in CRC sessions will highlight the scientific and management issues underpinning the restoration.

Finally, I want to thank the large number of people who have made this conference possible, starting with my extraordinary organizing committee, the ERF headquarters staff, and all those who have supported and encouraged us.

I look forward to extending a personal welcome to you.

Linda Blum

ERF 2005 Conference Chair



# of the Estuarine Research Federation

## Thank you for contributing to what promises to be an excellent conference!

Over 1,200 presentations are scheduled, about 100 more than ever before. Nonetheless, we plan to continue in the spirit of previous ERF conferences with plenty of time for formal and informal interactions between attendees.

The conference theme, *Estuarine Interactions: Biological-Physical Feedbacks and Adaptations*, has attracted a large contingent of scientists who study geomorphology, hydrodynamics, coastal processes, and other disciplines in the physical sciences. This swells our ranks that are often dominated by biologists, ecologists, environmental chemists and environmental managers. Many of the physical scientists have made efforts to link their work to biological processes and structure at different spatial and temporal scales. Their efforts, combined with the insights from other disciplines, will allow participants to understand better these interactions. Please, take advantage of the mix!

This year's highlights include both old and new features:

- Special synthesis sessions are designed to link presentations in other sessions with common themes.
- Two separate plenary sessions will be held, one on Sunday evening (ERF) and one on Thursday morning (Chesapeake Research Consortium).
- A special Chesapeake Bay Colloquium has been organized by the Chesapeake Research Consortium. This colloquium will be held on Thursday and Friday. While the ERF conference officially ends Thursday evening, registrants are welcome to stay through Friday's sessions.
- Extended introductory or summary presentations will be given in selected sessions.
- Special efforts were made to honor requests for the mode of presentation.
- Posters are linked to oral sessions of common themes as much as possible. Many poster presenters will have an opportunity to give brief summaries of their posters during oral sessions.
- Poster presentations are scheduled for the lunch period with food provided in the poster hall. Two interactive poster sessions are scheduled during the oral sessions.
- An “Observing Systems” room provides the opportunity to learn about regional, national, and international developments that will enhance both scientific research and environmental management.
- A display on the history of estuarine research.
- Special events occur throughout the meeting. Please review your conference program and the ERF conference web site for times and places.

We enthusiastically anticipate the ERF 2005 conference. Thanks again for helping us prepare what we hope is the most stimulating and rewarding ERF conference ever.

We look forward to seeing you in Norfolk!

**Bob Christian and Arnoldo Valle-Levinson**, Scientific Program Co-Chairs

**Vic Kennedy and Carl Friedrichs**, Poster Presentation Co-Chairs

**Rebecca A. Deehr**, Abstract Database Manager

# Conference At A Glance

Saturday 15-Oct	Sunday 16-Oct	Monday - Friday timing	Monday 17-Oct	Tuesday 18-Oct	Wednesday 19-Oct	Thursday 20-Oct	Friday 21-Oct
Field Trips all day	Field Trips all day		7:00 am - 8:00 am	UMEB Bkfst, Past Presidents' Breakfast	Women's Aquatic Network Breakfast	UMEB Bkfst, Editorial Board Breakfast	UMEB Breakfast
ERF Gov. Board Meeting all day	UMEB Field Trip - CBF (9-12) Std. Volunteer Training 9 -10:30  Scientific Publishing Workshop 10:30 - 12:30  Registration opens 1:00 - 7:00 pm  UMEB Welcome Recp. 2-4 pm Fiske Career Planning Wkshp 2-4 pm Profiler Wkshp 2:30 - 4:30  Head Table Reception 3:30 - 4:30  Plenary and ERF Awards Marriott 5:00 - 6:30 pm		8:00 am - 9:45 am	Morning Oral sessions ..... 6 rooms first floor Marriott, 4 rooms in Sheraton	Obs. Syst. Room	Colloquium Plenary Marriott 3	Colloquium Oral sessions Marriott Only
	9:45 am - 10:15 am			break	break	break	break
	10:15 am - 12 noon			Morning sessions continue ..... 6 rooms first floor Marriott, 4 rooms in Sheraton		Marriott Only	Colloquium Oral sessions Marriott Only
	12 noon - 2:00 pm			Poster sessions and lunch ..... 3rd floor Marriott Ballroom		Colloquium Poster Session/Lunch Marriott	Lunch On Your Own
	2:00 pm - 3:45 pm			Afternoon Oral sessions ..... 6 rooms first floor Marriott, 4 rooms in Sheraton		Marriott Only	Colloquium Oral sessions Marriott Only
	3:45 pm - 4:15 pm			break	break	break	break
	4:15 pm - 6:00 pm			Afternoon sessions continue ..... 6 rooms first floor Marriott, 4 rooms in Sheraton		Marriott Only	Colloquium Oral sessions Marriott Only
Gov. Board & ERF 2005 OC Recept 6:00 - 7:00 pm	Affiliate Societies' Meetings Marriott	6:00 pm - 7:00 pm	Affiliate Societies' Meetings Marriott	ERF Town Hall meeting Marriott	ERF Business Meeting Marriott	Student Awards Party	
	Wave Wkrshp (6:45)						
Presidents' Welcome Reception 7:00 - 9:00 pm (Sheraton)	Student Career Dinner 7 pm - 8 pm Sheraton	7:00 pm - 10:00 pm	Nauticus Reception 7:00 - 10:00	Receptions NERRS Recept VIMS Recept HS Crab Recept Conf Chairs Recept	Various Locations	Sheraton 6:00 - 8:00 pm	
	NOAA Town Hall Meeting	8:00-9:30 pm	3 blocks west walking distance				

# Special Meetings and Social Functions—at-a-Glance

See Page 20 for descriptions.

Function	Day	Time	Room
ERF Governing Board Meeting	Saturday	8:00 a.m. - 5:00 p.m.	
ERF Field Trips		all day	
Governing Board/ERF 2005 Org Comm Reception		6:00 p.m.	
ERF Field Trips	Sunday	all day	
UMEB Field Trip (CBF)		9:00a.m.	
Student Vol. Training		9:00 a.m. - 10:30 a.m.	
Tote Bag Stuffing		10:00 a.m.	
Workshop - Scientific Publishing Panel		10:30 a.m. - 12:30 p.m.	
Workshop - Career Planning		2:00 p.m. - 4:00 p.m.	
UMEB Orientation and Reception		2:00 p.m. - 4:00 p.m.	
Workshop - Multiparameter, High Speed Sampling		2:30 p.m. - 4:30 p.m.	
Plenary Head Table Reception		3:30 p.m. - 4:30 p.m.	
Plenary and ERF Awards		5:00 p.m. - 6:30 p.m.	
President's Welcome Reception		7:00 p.m. - 9:00 p.m.	
Past President's Breakfast	Monday	7:00 a.m. - 8:00 a.m.	
UMEB Breakfast		7:00 a.m. - 8:00 a.m.	
Affiliate Society Meetings		6:00 p.m. - 7:00 p.m.	
Estuarine Wave Modeling Workshop		6:45 p.m. - 8:00 p.m.	
Student Career and Networking Dinner		7:00 p.m. - 8:00 p.m.	
NOAA Town Hall Meeting		8:00 p.m. - 9:30 p.m.	
Women's Aquatic Network Breakfast	Tuesday	7:00 a.m. - 8:00 a.m.	
Observing System Room		8:00 a.m. - 6:00 p.m.	
ERF Town Hall Meeting		6:00 p.m. - 7:00 p.m.	
Nauticus Reception		7:00 p.m. - 10:00 p.m.	
R/V Fay Slover Open for Tours		7:00 p.m. - 10:00 p.m.	
Editorial Board Breakfast	Wednesday	7:00 a.m. - 8:00 a.m.	
UMEB Breakfast		7:00 a.m. - 8:00 a.m.	
ERF Business Meeting		6:00 p.m. - 7:00 p.m.	
NERRS Graduate Student Fellowship Reception		6:30 p.m. - 8:00 p.m.	
VIMS Alumni, Faculty and Student Reception		7:00 p.m. - 9:00 p.m.	
Horseshoe Crab Forum - Suds, Snacks, Ruminations		7:00 p.m. - 9:00 p.m.	
Past, Present, Future Conference Chairs Reception		7:30 p.m. - 9:00 p.m.	
UMEB Breakfast	Thursday	7:00 a.m. - 8:00 a.m.	
CRC Colloquium Plenary		8:00 a.m. - 9:45 a.m.	
Student Awards Reception		6:00 p.m. - 8:00 p.m.	

**For correct room locations for these events, please check the bright yellow sheet in your conference satchel or visit the conference web site.**

# Conference Organizers, ERF Governing Board, Committees and Staff, 2003-2005

## ERF 2005 Conference Organizing Committee

ERF 2005 Conference Chair  
Scientific Program Co-Chairs

Poster Program Co-Chairs

Abstract Database Manager  
Publicity  
Student Education  
Student Travel Awards  
Student Volunteers

Student Judging Co-Chairs

Fund Raising  
Field Trips  
International Travel Support  
Chesapeake Research Consortium  
Computer Central  
Publicity  
Conference Oversight & Workshops  
Conference & Website Management

## ERF 2005 Scientific Program Subcommittee

East Carolina University: Lisa Clough, Reide Corbett, Lorry King, Joe Luczkovich, Dave Mallinson, Terry West  
Old Dominion University: Eileen Hofmann, Margie Mulholland, Fred Dobbs, Tom Royer, Skip Styles  
Woods Hole Oceanographic Institute: Rocky Geyer

## ERF Governing Board, 2003-2005

President  
Past President  
President – Elect  
Secretary  
Treasurer  
Members-at-Large  
(2003-2007)  
(2001-2005)  
(2001-2005)  
(2003-2007)  
AERS President  
ACCESS President  
CAERS President  
GERS President  
NEERS President  
PERS President  
SEERS President

**Journal Staff**  
Co-Editor in Chief  
Co-Editor in Chief  
*Estuaries* Managing Editor

**ERF Committees**  
Education Committee  
Finance & Investment Committee

Publications Committee

**ERF HQ Staff**  
Executive Director  
Chief Operations Officer  
Chief Financial Officer  
Web Master  
Membership and Conference Services

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Bob Christian  
Arnoldo Valle-Levinson  
Vic Kennedy  
Carl Friedrichs  
Becky Deehr  
Dave Malmquist  
Elizabeth Hinchen  
Paul Carlson  
Dan Dauer  
Janet Nestlerode  
Chris Swarth  
Judith Stribling  
Bob Orth  
Karen McGlathery  
Anne Giblin  
Kevin Sellner  
Cory Christman  
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Joy Bartholomew  
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University of Virginia  
East Carolina University  
Old Dominion University  
University of MD, HPEL  
Virginia Inst. of Marine Science  
East Carolina University  
Virginia Inst. of Marine Science  
IL-IN Sea Grant College Program  
FL Fish & Wildlife Cons. Comm.  
Old Dominion University  
EPA Gulf Breeze Lab  
Jug Bay Wetlands Sanctuary  
Salisbury University  
Virginia Inst. of Marine Science  
University of Virginia  
Marine Biological Laboratory  
Chesapeake Research Consortium  
Old Dominion University  
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Virginia Institute of Marine Science  
USC, Baruch Marine Lab  
East Carolina University  
US Geological Survey, Menlo Park  
UMCES, Chesapeake Biological Lab  
  
University of Georgia  
Florida International University  
Tampa Bay Estuary Program  
CINVESTAV-IPN Unidad Merida, MX  
Jug Bay Wetlands Sanctuary, MD  
Gulf Fisheries Center, Moncton, NB  
Fair Oaks, CA  
USGS, National Wetlands Research Center, TX  
ENSR Consulting Engineering  
USEPA, NHEERL, Western Ecology Div.  
Center for Marine Science, UNC-WIL

University of Rhode Island  
Inst. Mediterraneo de Estudios Avanzados, Spain  
University of Mississippi

Keck Env. Lab., College of Wm. & Mary  
UMCES, Chesapeake Biological Laboratory  
Washington Sea Grant Program, UW  
University of South Carolina  
Southern California Water Research Program  
University of South Florida

Duke University

# General Information

## Conference Location - Two Venues

All oral and poster scientific presentations, as well as most social functions, will take place either in the Norfolk Waterside Convention Center (attached to the Norfolk Waterside Marriott Hotel) or the Sheraton Norfolk Waterside Hotel (across the street).

To access the Sheraton from the Marriott, exit the front entrance of the Marriott, turn to your right and walk to the end of the block. Take a right onto Atlantic Street, go one block and cross over Waterside Drive at the light. The Sheraton is on the left. Downtown Norfolk Public Safety Ambassadors are located strategically in the downtown area and available to assist with any questions or directions throughout area. The Norfolk Public Safety Ambassadors wear navy blue uniforms with teal accents.

## Poster Hall Sessions Convened at Mid-Day\*

Marriott Norfolk Waterside Convention Center,  
Hampton Roads Ballroom, third floor

The poster hall will be open for viewing posters from 9:00 a.m. – 6:00 p.m. Monday through Thursday. Each poster will be available for viewing for one full day. (Posters should be mounted from 7:00 a.m. – 9:00 a.m. and should be removed by 8:15 p.m.)

Presenters will be available to discuss their posters during the 2-hour block **from 12:00 p.m. - 2:00 p.m.** on Monday through Thursday. **Lunch will be provided** in the poster hall.

\* In keeping with the Organizing Committee's major goal of maximizing the time for the poster program and minimizing competition with other factors, functions previously scheduled at lunchtime have been moved to other times so there will be no conflicting activities.

## Interactive Poster Sessions

Two interactive poster sessions will be located in oral presentation rooms during the oral session times: Symposium-05, Monday, Providence Hall, Sheraton Hotel, 8:00 a.m. – 6:00 p.m. and Special Session-02, Tuesday, Room M1, Marriott Norfolk Waterside Convention Center, first floor, 10:15 a.m. – 12:00 p.m.

Please consult the daily schedule found in this program book for a complete list of the posters scheduled for these sessions.

## ERF 2005's Chesapeake Bay Colloquium

*Convened by the Chesapeake Research Consortium*



The Estuarine Research Federation's acceptance of the two day Chesapeake Bay Colloquium as part of the ERF 2005 conference in Norfolk is deeply appreciated by the region's research and management communities.

Proposed and convened by members of the Chesapeake Research Consortium, a non-profit partnership of six major research institutions around the Chesapeake Bay (CRC, [www.chesapeake.org](http://www.chesapeake.org)), the 2-day Colloquium provides the opportunity for presentations of regional research, management, and policy activities.

The Chesapeake Bay Colloquium has been fully integrated into the Federation's biennial conference. All conference attendees are welcome and encouraged to attend the Colloquium's sessions.

The first day of the Colloquium is Thursday, October 20<sup>th</sup>, the last day of the ERF 2005 conference. Hence, Bay-specific presenters will provide Bay, basin, or watershed results relevant to the international community participating in the ERF 2005 conference.

### ERF Conference Recording Policy

The preparation of tape recordings, audiovisual tracks and the recording of images for subsequent sale, group presentations or individual use are strictly prohibited.

To begin the Colloquium an opening plenary session entitled "What's the future for the Chesapeake: A model for other estuaries?" will be held on Thursday morning with no other sessions scheduled at that time. The 2005 conference Organizing Committee found the plenary topic and the speakers to be sufficiently intriguing that they arranged the schedule for it to stand alone so all conference attendees can take advantage of the outstanding speakers and timely topics. All attendees will have an opportunity to reflect on the current state of coastal research science in our region. We invite and encourage all ERF 2005 meeting participants to attend this plenary session and the other Colloquium sessions.

The Colloquium's plenary speakers will address the effects of population growth and accompanying impacts of the watershed, its fisheries, agriculture, and the potentially critical role of regional observatories from the Appalachian Mountains to the Atlantic coast.

The second day of the Colloquium follows the official close of the ERF 2005 conference and is designed

to encourage information exchange specific to the region.

This Chesapeake Bay Colloquium represents the re-emergence of the large, multi-day, multi-disciplinary Bay-specific conferences that have been convened by the CRC since its formation in 1972. Held every 3-5 years in the past 30+ years, the Colloquium at ERF 2005

reinitiates this tradition and has generated sufficient interest to foster regional support for another CRC conference three years out, in 2008.

The CRC invites and encourages all ERF 2005 participants to join us at the Colloquium. Your participation will insure open and vibrant discussion during the 20

## Conference Exhibitors

(as of July 2005)

**Elsevier, Inc.**  
New York, NY

**EnviroTech, LLC**  
Chesapeake, VA

**Fluid Imaging Technologies**  
Edgecomb, ME

**Hach Environmental**  
*offering Hydrolab & Ott Products*  
Loveland, OH

**In Situ, Inc.**  
Fort Collins, CO

**RD Instruments**  
San Diego, CA

**Society of Environmental Toxicology and Chemistry**  
Pensacola, FL

**Turner Designs, Inc.**  
Sunnyvale, CA

**WetSat, Inc.**  
Philomath, OR and  
Halifax, NS, Canada

**YSI Incorporated**  
Yellow Springs, OH

sessions in its two-day schedule, and will allow us to relay Chesapeake Bay-specific information to our international members as well as regional colleagues and constituents.

## Conference Registration

The ERF conference registration/information area will be located at the Marriott **Norfolk Waterside Convention Center** (ERF 2005 Headquarters Hotel) on the third floor pre-function area and will be open the following dates and time:

Sunday, October 16, 2005	1:00 p.m. – 7:00 p.m.
Monday, October 17, 2005	7:00 a.m. – 6:00 p.m.
Tuesday, October 18, 2005	7:30 a.m. – 6:00 p.m.
Wednesday, October 19, 2005	7:30 a.m. – 6:00 p.m.
Thursday, October 20, 2005	7:30 a.m. – 6:00 p.m.
Friday, October 21, 2005	7:30 a.m. – 6:00 p.m. (Chesapeake Bay Colloquium)

## Coffee Breaks

Coffee breaks are scheduled twice daily at 9:45 a.m. – 10:15 a.m. and at 3:45 p.m. – 4:15 p.m. Monday through Wednesday, the breaks will be located at both hotels: just outside the ballroom at the Sheraton and inside the poster hall (third floor ballroom) at the Marriott. On Thursday and Friday, the breaks will only be at the Marriott inside the poster hall (third floor ballroom).

## Message, Announcement, Jobs, Daily Schedules Boards

Three boards will be located in the registration area (third floor Marriott): Message and Announcement board and a Jobs board will be available for everyone's use. The daily scientific program schedule with addenda will be posted on a third board in this area. Each daily session room schedule with addenda will also be posted outside each session room. Also, the full daily schedule with addenda will be posted near the Computer Central Office, located in the Marriott Norfolk Waterside Convention Center, Ballroom, 4th Floor.

## Emergency Contact Information

For medical emergencies, dial zero from any phone in either hotel. The Operator will contact the police and fire department. Routine telephone messages should be left at the participant's hotel. Contact anyone at the conference registration/information area if you need additional assistance.

## Business Office Services

The Marriott Norfolk Waterside Convention Center has a self-serve business center on the first floor, with computer Internet access, copying capability, and faxing services. The Business Center only accepts credit cards for services rendered.

The Sheraton Norfolk Waterside has a self-service business center located on the third floor across from the International Ballroom, with computer Internet access, copying capability, and faxing services. The Business Center only accepts credit cards for services rendered.

## Getting To Norfolk

### ERF 2005 Official Airline

American Airlines has been designated the “official airline” for the ERF meeting. They are offering 5% off the lowest applicable fare. For reservations and ticketing information, call American Airlines Meeting Services Desk, or have your travel professional call **1-800-433-1790** from anywhere in the United States or Canada, seven days a week, from 5:00 a.m. to 12:00 midnight (Central Time), and reference the **STARfile number: S16H5AM**. Reservations for the hearing and speech impaired are also available 24 hours a day, seven days a week, at 1-800-543-1586.

### Rental Cars

Avis has been selected as the “official” car rental agency for the 2005 ERF meeting. The Avis Worldwide Discount (AWD) Number for the meeting is: **J998420**. Please call Avis direct at **1-800-331-1600** to receive the best car rental rates available and specify the **AWD #J998420** when making your reservation.

Other rental car offices are located in the baggage claim area below the main terminal lobby at Norfolk International Airport.

### Airport Shuttles

#### Norfolk Airport Express

Norfolk Airport Express operates between Norfolk International Airport and Norfolk. Service departs continuously from the airport. Norfolk Airport Express is located outside baggage claim at the booth marked “Airport Express Shuttle Service” outside door number three. The approximate cost for one person, roundtrip

service is \$33.00 USD. If more than one person is traveling to the same destination the cost per person is cheaper depending on the number traveling. For further information you may contact Norfolk Airport Express via telephone at 757-857-3991.

#### Orange Peel Transportation, Inc.

Orange Peel Transportation will provide transportation to and from Norfolk International Airport. To make reservations, please visit [www.orangepeeltransportation.com](http://www.orangepeeltransportation.com) or call us at 757-463-7500.

### Taxi Service

Taxicab service is located just outside the baggage claim lobby. Five persons can ride for the price of one as long as they are going to the same destination. The approximate rate for taxicab service is \$23.00 USD (one-way) from Norfolk International Airport to downtown Norfolk. The fare is based on the meter for South Hampton Roads and is assessed at a flat rate beyond that region. Payment may be made by cash, and in some instances credit cards and corporate charge accounts are available.



*A morning mist hangs over the Pocatoc River in Virginia Beach and sets the stage for an outdoor adventure. Photo courtesy Virginia Beach Convention & Visitors Bureau.*

# Staying in Norfolk

## Conference Hotels

Please help contain conference costs by staying at the hotels listed below! **To receive the special ERF 2005 conference rates, please tell the reservation desk that you are attending the ERF 2005 Conference.**

### Norfolk Waterside Marriott

(ERF 2005 Headquarters Hotel)  
235 East Main Street, Norfolk, VA 23510  
Telephone: 757-627-4200, Fax: 757-628-6452

*To make reservations on-line:*

<http://www.stayatmarriott.com/ERF>

Rates: \$119.00 USD for single/double/triple/quad occupancy (plus applicable taxes)

### Sheraton Norfolk Waterside Hotel

(across the street from the conference center)  
777 Waterside Drive, Norfolk, VA 23510  
Telephone: 757-622-6664, Fax: 757-622-4571

*Web Site:* [www.sheraton.com/norfolk](http://www.sheraton.com/norfolk)

Rates: \$119.00 USD for single or double occupancy, \$134.00 USD for triple occupancy, and \$149.00 USD for quad occupancy (plus applicable taxes)

### Clarion James Madison

(a few blocks away from the conference center)  
345 Granby Street, Norfolk, VA 23510  
Phone: 757-622-6682, Fax: 757-623-5949

*Web Site:* [www.clarionhotel.com/ires/hotel/va332](http://www.clarionhotel.com/ires/hotel/va332)

Rates: \$89.00 USD for single or double occupancy (plus applicable taxes)



Lynnhaven Inlet at Sunset. Photo courtesy Virginia Beach Convention & Visitors Bureau.

## Getting Around Downtown Norfolk

### Hampton Roads Transit

The local bus company is the Hampton Roads Transit. There are stops throughout the downtown area and this bus service travels throughout the entire Hampton Roads area. The hours of service are Sun.-Sat. from 5:00 a.m. to 12:00 a.m. (midnight). For more information concerning prices, hours, routes, etc., please call 757-222-6100 or [www.hrtransit.org](http://www.hrtransit.org).

### Free NET (Norfolk Electric Transit) Shuttle

Running along a 2.2 mile loop, the NET runs approximately every six to fifteen minutes, making a total of 16 stops. The NET runs from 6:30 a.m. to 11:00 p.m., Monday through Friday; 12:00 p.m. to 12:00 a.m. Saturdays, and 12:00 p.m. to 8:00 p.m. on Sundays. Additional services are added during peak hours. Just look for the blue NET signs conveniently displayed throughout the city, including a downtown map marking popular attractions around town.

### Parking

In close proximity of the Norfolk Waterside Marriott and the Sheraton Norfolk Waterside, surface parking is available at Harbor Park - Lot D. The cost is \$5.00 USD per day, per vehicle. To get from the Harbor Park-Lot D to either hotel, you would take the NET (Norfolk Electric Transit)—free shuttle. There is a stop about one block from the parking lot at Harbor Park. The Norfolk Convention & Visitors Bureau will have a representative at registration on **Monday morning only**, October 17, 2005, issuing parking passes and accepting payment for the use of Harbor Park – Lot D.

### Alternate parking options

Norfolk Waterside Marriott Hotel: daily parking rate is \$14.00 USD for self park; \$19.00 USD for valet. The Dominion Tower (next door to the Sheraton Norfolk Waterside): daily parking rate is \$17.00 USD.

### Child Care

Tidewater Sitting Service, LLC has been in business since 1949. It serves as a referral service in the Tidewater area. The sitters are 21 years to grandmother and self-

employed and can be available to go to hotels. Tidewater Sitting Services minimum hours for sitting are as follows: 4 hour minimum during the weekdays and 5 hour minimum on weekends (Friday 5:00 p.m. through Sunday night.)

For more information, or to make childcare arrangements during the ERF 2005 conference, please contact Tidewater Sitting Service LLC at 757-456-202, via fax 757-456-2025, or via e-mail, CAMNORF@aol.com. Tidewater Sitting Services, LLC physical address is 513 Carnation Avenue, Virginia Beach, VA.

## Conference Management

For more information on the ERF 2005 conference, address all correspondence and questions regarding registration, exhibits, conference logistics, and hotel accommodations to:

Helen Schneider Lemay, Conference Manager  
sg Meeting & Marketing Services  
5400 Bosque Boulevard, Suite 680  
Waco, TX 76710-4446  
Phone: 254-776-3550, Fax: 254-776-3767  
E-mail: membership@erf.org



Spring tide at Upper Phillips Creek Marsh, Virginia Coast Reserve Long Term Ecological Research, Eastern Shore, Virginia. Photo by Linda Blum.

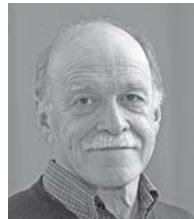
# Sunday Afternoon Plenary Session

## Plenary Schedule

<b>5:00 p.m. -</b>	<b>Marriott Norfolk Waterside Convention Center</b> <i>Ballroom, first floor</i>
<b>6:30 p.m.</b>	Linda Schaffner, ERF President, 2003-2005, Presiding
	<b>Welcome and Introductions</b> Linda Blum, ERF 2005 Conference Chair
	<b>President's Address</b> Linda Schaffner
	<b>Awards</b> Anne Giblin, ERF President, 1999-2001, ERF Awards Committee Chair
	<i>Odum Award</i> John Hobbie
	<i>Pritchard Award</i> Parker MacCready
	<i>Niering Award</i> Ivan Valiela
	<i>Cronin Award</i> Peter Raymond
	<i>Keynote Address</i> Graham Harris
	<i>Journal Reviewer Awards</i> Steve Threlkeld
	<b>Announcements</b> Linda Blum
<b>6:30 p.m.</b>	Adjourn
<b>7:00 p.m. -</b>	<b>President's Reception</b>
<b>9:00 p.m.</b>	<i>Sheraton Ballroom</i>

## Estuarine Research Federation 2005 Scientific Award Recipients

### Odum Award for Lifetime Achievement



**John Hobbie**

Co-Director and Senior Scientist  
The Ecosystems Center at the  
Marine Biological Laboratory  
Woods Hole, MA

John Hobbie is an aquatic ecologist.  
In his research, he has attempted to

identify the factors controlling decomposition and productivity within aquatic ecosystems. He is primarily interested in the role natural assemblages of microbes play in ecosystems.

John's other research interests include seeking understanding of what controls bacterial numbers, learning how much land-derived organic matter is used in Arctic lakes and in the coastal zone, and developing an understanding of the controls of nutrient fluxes from terrestrial ecosystems to rivers, lakes and coastal oceans.

The criteria for the Federation's Odum Award call for the recipient to have a sustained record of important contributions to our understanding of estuaries. John Hobbie has been sustaining an impressive array of research and outreach activities for over 40 years and shows no signs of slackening of his pace.

Hobbie has published over 140 research articles and has edited several books. His 1975 paper with Ralph Daley, "Direct Counts of Aquatic Bacteria by a Modified Epifluorescence Technique," won a "Citation Classic" award and has been among the most cited papers in environmental science. He is noted as an author whose writings cover a wide range of topics ranging from arctic limnology to coastal ocean biogeochemistry and microbial activity in oceans, lakes and soils.

One of the nominations letters recommending John Hobbie for the Odum award included the following; "he is a true systems thinker and interdisciplinarian in the same sense as the Odums." This aspect of John's work is certainly reflected in many of his papers and clearly the focus of a recent book on synthesis in estuarine science.

Finally, John has made huge contributions to the process of estuarine research via his many-decades of active support, leadership and encouragement for NSF programs such as LMER and LTERs focusing on estuarine ecosystems. He has served in numerous leadership and executive posts for several research agencies and scientific societies. The Odum award is the latest recognition of John Hobbie's research excellence, and joins an impressive array of other such recognitions. Earlier this year, the Marine Biological Laboratory named him a Distinguished Scientist for his achievements.

### **Donald W. Pritchard Award for *Estuaries'* Geophysics Paper**



**Parker MacCready**

Physical Oceanography Department  
University of Washington, Seattle

The Donald W. Pritchard Award recognizes the author or authors of a paper judged to make the most meritorious contribution to the field of estuarine physics that is published in *Estuaries* in the 24-month period ending December of the year preceding the award. The 2005 Donald W. Pritchard Award will be presented to Parker MacCready for his 2004 paper, "Toward a Unified Theory of Tidally-Averaged Estuarine Salinity Structure", which was published in *Estuaries*, 27, 561-570.

Professor MacCready is a faculty member in the Physical Oceanography Department at the University of Washington. He is an unusually gifted scientist with a broad range of interests. He specializes in the theoretical interpretation of coastal and estuarine flow with particular emphasis on stratified flow over bottom topography combining theory, modeling, observations and laboratory experiments. Early in his career he won acclaim for his use of flapping-wing propulsion for a human-powered hydrofoil boat.

The paper for which he receives the Pritchard award describes a novel theory of how rapidly and how much the circulation and stratification in an estuary would change following a change in river flow or tidal mixing. He has reconsidered the classical, tidally averaged steady theories and used his own earlier work to significantly improve what we know about estuarine circulation.

### **William A. Niering Award for Outstanding Educator**



**Ivan Valiela**

Professor

Boston University Marine  
Program and The Marine  
Biological Laboratory  
Woods Hole, MA

Since obtaining his Ph.D. from Cornell University in 1968, Ivan has advised more than 50 M.A. and Ph.D. students and produced over 200 publications, a number of them are seminal papers in the estuarine field.

In their letters of support for his nomination for the William A. Niering Award, colleagues and former students wrote about the many ways that Ivan contributed to their education and growth as estuarine scientists. From informal meetings to help students think critically about their research, to two textbooks one on estuarine ecology and one on doing science that are used by students and faculty internationally, Ivan educates students in ways that are meaningful and inspirational.

The awards committee found it was remarkable to read the many testimonials from students whose careers in science were influenced by Ivan's mentoring and motivation. Ivan has not created a world of scientists in his own professional image, but instead he has encouraged his students to grow in very diverse directions. The awards committee noted: "Ivan has always been about the real world. He lives by example for his students to share with him. An estuarine- and life-educator who has given freely and fully of himself; he is truly deserving of the William A. Niering Outstanding Educator Award."

### **Cronin Award for Early Career Achievement**

**Peter Raymond**

Assistant Professor

Yale School of Forestry and Environmental Studies  
New Haven, CT

Dr. Peter Raymond is the 2005 recipient of the Cronin Award. Pete completed his PhD degree at the School of Marine Science, College of William and Mary, under

the tutelage of Dr. Jim Bauer in 1999. His dissertation research was on *Carbon Cycling in the York River Estuary: An Isotopic and Mass Balance Approach Using Natural <sup>14</sup>C and <sup>13</sup>C Isotopes*.

After completing postdoctoral fellowships at the Ecosystems Center, Marine Biological Labs in 2001, and Woods Hole Oceanographic Institution in 2002, Pete moved on to a tenure track assistant professorship at Yale School of Forestry and Environmental Studies, where he uses stable and radioactive carbon isotopes to study the fluxes, turnover, and reactivity of carbon in riverine, estuarine, and coastal ecosystems.

Thus far, Pete has authored or co-authored 16 papers, two published in *Science* and one in *Nature* and three in *Estuaries*. One colleague's letter of support noted that Pete is the lone "water person" amongst many foresters and terrestrial ecologists at Yale, and continued saying "he has had an enormous impact here in opening many eyes to the significance of estuaries as ecosystems of critical importance." Other recommenders' letters describe the large impact Pete's research has had on the ecological community, his creativity, networking skills, and educational contributions at Yale.

We are pleased to recognize and honor the breadth and interdisciplinary nature of Pete Raymond's research interests, the quality of his publications, his teaching accomplishments and the impact he has had on the field of coastal ecology with the Cronin Award.

## ERF 2005 Conference Plenary Speaker



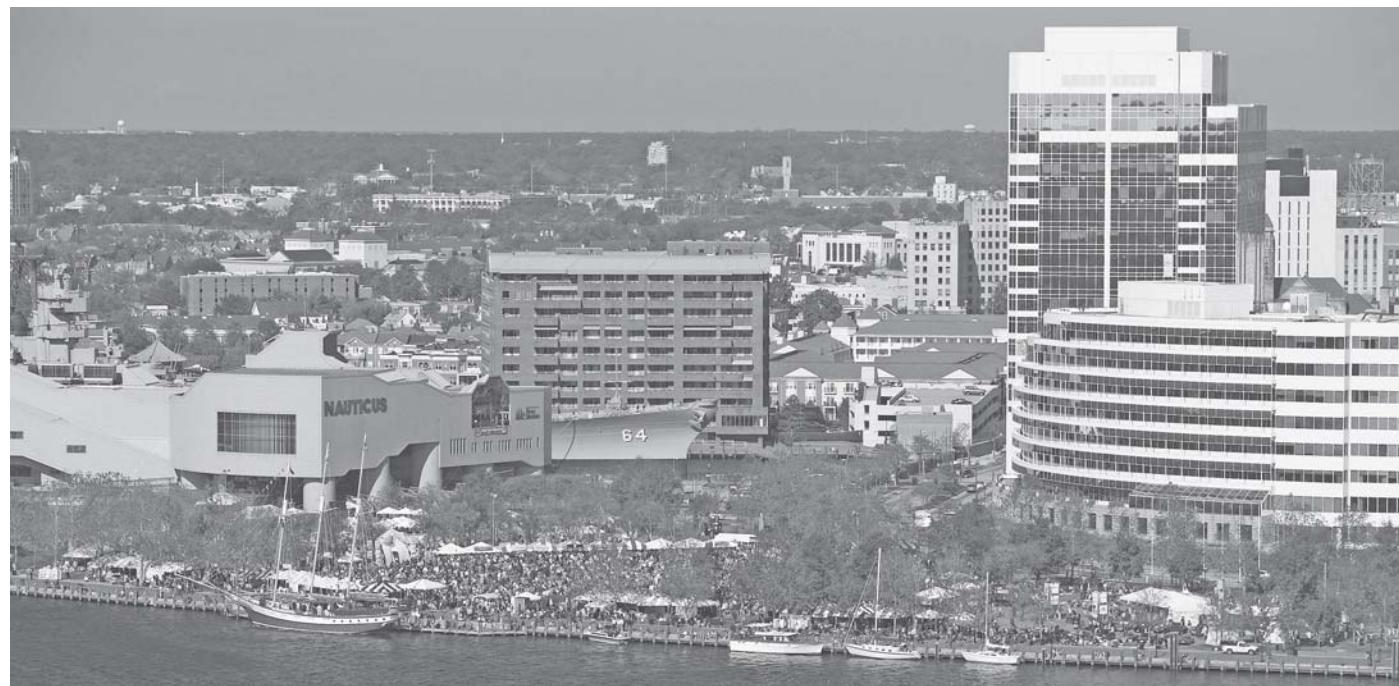
### Graham Harris

Chair

Commonwealth Scientific and Industrial Research Organization (CSIRO) Flagship Programs  
CSIRO Corporate Centre, Australia

Dr. Graham Harris is an eminent ecologist, freshwater and marine biologist. Dr. Harris has an international reputation for work in aquatic and terrestrial ecology, freshwater biology, pollution monitoring, biological oceanography, and remote sensing, publishing more than 100 papers and four books. He has also done leading work in fisheries dynamics and the effects of climate variability. Dr. Harris was previously Chief of CSIRO's Division of Land and Water, and Head of CSIRO's Environmental Projects Office.

Dr. Harris was leader of CSIRO's Port Phillip Bay Environmental Study, which has since prompted similar in-depth studies in Sydney and Adelaide. He was also the leader of CSIRO's Coastal Zone Program and involved in CSIRO's Blue-Green Algal Research Program, and is an Adjunct Professor at the University of Adelaide. Dr. Harris was born in the UK and graduated from Imperial College, London, in Botany. He joined CSIRO after a distinguished career as a biology professor in Canada.



Norfolk waterfront attracts crowds during the mid October Wine Festival. Photo courtesy of Norfolk Convention and Visitor's Bureau

# General Scientific Program Information

## Student Award Information

We are planning awards for the best graduate and undergraduate poster and oral presentations in several categories to encourage quality work and to reward those that show creativity and good science through poster displays. The awards will be presented at the reception on Thursday evening at 6:00 p.m.

## Oral Session Information

Oral sessions will be held in six rooms on the first floor of the Marriott (M1, M2, M3, M4, M5 and M6) Monday morning through Thursday afternoon. Oral sessions will also be held Monday morning through Wednesday afternoon in 4 sections of the third floor ballroom in the Sheraton Hotel (Poplar Hall, Providence, Stratford and York Hall). Marriott rooms M1, M2, M3 and M4 will also be used throughout the day on Friday for continuing Chesapeake Bay Research Colloquium sessions.

There will be ten concurrent oral sessions from Monday morning, October 17, through Wednesday afternoon, October 19, in both the Sheraton and the Marriott. On Thursday, October 20, six concurrent sessions will be held in the Marriott only, and on Friday, October 21, four concurrent sessions will be held in rooms M1, M2, M3 and M4 of the Marriott.

Oral presentations are allotted 12 minutes for the talk and 3 minutes for questions (a total of 15 minutes). Some sessions may feature a 30-minute presentation either at the beginning or end of the session. Poster summaries are included in several sessions; generally, poster summary presentations will only last 1.5 minutes and may include one PowerPoint slide or overhead transparency for display during the talk. Be sure to contact your session chair for additional instructions if you are giving a poster summary. Session chairs will adhere strictly to the printed schedule to facilitate movement between sessions and to ensure that all presenters and conference participants have the best conference experience possible.

Each oral session room will be equipped with a laptop computer and LCD projector, an overhead projector, screen and laser pointer. A 35-mm slide projector will be available only upon request. Please contact Computer Central (cchristm@odu.edu) (Marriott, 4th floor, ballroom, section 3) as early as possible if you wish to use a slide projector. Each room will be staffed by two

student volunteers to assist with all aspects of the presentations. Each speaker should introduce him- or herself to the session chair and the student volunteers during the break before the session in which he or she is speaking.

## Synthesis Sessions

An innovative aspect of the conference's scientific program is the inclusion of Synthesis Sessions. During these sessions exciting, emerging topics on estuarine research and management will be emphasized.

Synthesis Sessions will be 90 minutes long with a team of three featured speakers and two moderators. Each speaker will give a 20-minute synthesis of salient aspects of conference

sessions relevant to the synthesis topic and provide their perspective on future research needs with special emphasis on the conference theme, *Estuarine Interactions:*

*Biological-Physical Feedbacks and Adaptations.* After each speaker, 10 minutes will be available for discussion.

**Five synthesis sessions** have been scheduled over two days of the conference, Tuesday and Wednesday, October 18 and 19. Times and locations for the synthesis sessions are:

### Tuesday, October 18

Session 1: *Interactions with Estuarine Physics*

4:15 p.m. – 6:00 p.m.

Marriot Norfolk Waterside Convention Center, Ballroom, first floor, Room M6

### Wednesday, October 19

Session 3: *Interactions with Management of Estuarine Systems*

4:15 p.m. – 6:00 p.m.

Sheraton Norfolk Waterside, Poplar Hall, third floor

Session 4: *Interactions with Estuarine Biology*

4:15 p.m. – 6:00 p.m.

Sheraton Norfolk Waterside, Stratford Hall, third floor

Session 5: *Interactions with Observing Systems*

4:15 p.m. – 6:00 p.m.

Marriot Norfolk Waterside Convention Center, Ballroom, first floor, Room M5

## ERF Conference Recording Policy

The preparation of tape recordings, audiovisual tracks and the recording of images for subsequent sale, group presentations or individual use are strictly prohibited.

**Thursday, October 20***Session 2: Interactions with Estuarine Chemistry*

10:15 p.m. – 12:00 noon

Marriot Norfolk Waterside Convention Center,  
Ballroom, fourth floor, Section 3

We hope you'll take the opportunity to participate in these new, interactive sessions!

**Computer Central Room***Marriott, 4th floor ballroom, section 3*

Cory Christman, Manager (cchristm@odu.edu)

Computer Central will be open

Sunday, October 16 ..... 12:00 p.m. – 8:00 p.m.

Monday, October 17 –

Wednesday, October 19 ..... 7:00 a.m. – 8:00 p.m.

Thursday, October 20 ..... 7:00 a.m. – 6:00 p.m.

Friday, October 21 ..... 7:00 a.m. – 4:15 p.m.

Each oral presenter must bring their presentation to Computer Central **AT LEAST 24 HOURS** prior to

their oral session. Monday morning presenters should email their presentations to Cory Christman before the conference or bring them directly to Computer Central on Sunday before 5:00 pm. Presenters will have no access to their presentations after they have been submitted to Computer Central.

Presentations should be in Power Point (not Keynote) and loaded onto either a flash drive or burned onto a CD. If you have questions about, or special needs, for your presentation (for example, you require video), please contact Cory.

**Note:** If you are using a presentation mode other than Power Point, such as an overhead projector or a slide projector, you MUST check in with Computer Central 24-hours in advance so they can make this equipment available in your session room. If using slides, we recommend preloading your own carousel and bring to Computer Central so they can make sure it works properly on the available projectors.

**Note:** *No individual computers will be used in the oral sessions.*



The ERF 2005 conference organizing committee on the waterfront in Norfolk, Virginia. Top row from left: Linda Blum, Chris Swarth, Linda Schaffner, Arnoldo Valle-Levinson and Joy Bartholomew. Front row from left: Bob Christian, Karen McGlathery, Randy Chambers, Vic Kennedy, Dan Dauer and Carl Friedrichs.

## **Speaker Ready Room**

*Marriott, 4th floor ballroom, section 2*

Sunday, October 16 ..... 12:00 p.m. - 8:00 p.m.  
Monday, October 17 –  
Wednesday, October 19 ..... 7:00 a.m. - 8:00 p.m.  
Thursday, October 20 ..... 7:00 a.m. - 6:00 p.m.  
Friday, October 21 ..... 7:00 a.m. – 5:45 p.m.

Located adjacent to Computer Central, this room will be open from Sunday through Friday. It will be equipped with computers, an LCD projector, slide projector, and an overhead projector. Speakers may modify or view their presentations prior to submitting them to the Computer Central team.

Since we will only have a few computers in this room, a sign-up sheet will be available in Computer Central on a first-come, first-serve basis.

## **Poster Session Information**

All poster presenters should fill out the Poster Questionnaire at the following webpage (<http://www.erf.org/user-cgi/erf05posterform.pl>) before September 2, 2005. If it is not filled out, we will assume that the only supplies you need to are pushpins.

### **Overview**

In order for us to provide a high quality poster session, we will need the cooperation of all contributors. Therefore, we have prepared the following guidelines to assist participants in preparing and displaying poster presentations in Norfolk, Virginia. The guidelines below address poster requirements, recommendations, restrictions, and how to request special accommodations. We ask that you review the guidelines, adhere to the requirements, and advise us of special needs. Contact us if you need clarification.

### **Interactive Posters**

Interactive poster presentations are planned for two of the oral sessions. These posters will be set up in the same room as the oral session and time will be allotted for each poster presenter to give a two minute introduction/summary of their work from the podium. The audience will have the chance to view the poster and question the author during the day's breaks. The posters can be moved to the Poster Hall when the session ends and will be available for all attendees to view. **All interactive poster presenters should follow the same guidelines for those in the General Poster Session.**

## **Poster Hall Location**

Conference organizers have designed a layout in the **Hampton Roads Ballroom** on the third floor of the Marriott Norfolk Waterside Convention Center that will allow for easy access and interesting displays. Posters will be organized by theme or subject matter. Each poster will be assigned a number and location that will correspond to a map located on page 110 of the conference program.

## **Important Times for Poster Presenters**

Please mount your poster on your assigned board between 7:00 a.m. and 9:00 a.m. on your assigned day (Monday, Tuesday, Wednesday, or Thursday).

You are expected to be at your poster from 12:00 p.m. – 2:00 p.m. on the day that your poster is displayed. The morning and afternoon coffee breaks in the poster hall are also good times to be available.

Please plan to keep your poster up on your board until at least 6:00 p.m. Please plan to remove all posters and associated paraphernalia by 8:15 p.m. each day or the posters will be discarded.

In many of the oral sessions, poster summaries will draw the attendee's attention to posters hall posters associated with that particular session.

## **Poster Information Booth**

A poster information booth will be set up near the doors to the poster hall. Please stop by to confirm your poster position, pick up pushpins, and ask questions.

## **Poster Format and Content**

New technologies and media have expanded and enhanced the types of presentations that may be given during the poster sessions. Therefore, we have tried to anticipate various presentation media and needs in preparing these guidelines. However, in order for conference organizers to meet your needs (and avoid last-minute surprises), please complete the information form, which will help us identify supplies, equipment, materials, and/or special needs for your presentation. The questionnaire is available at <http://www.erf.org/user-cgi/erf05posterform.pl> and should be filled out and submitted to confirm your presentation no later than September 2, 2005.

Keep your poster simple and provide a clear “take-home” message; you can provide details in discussions or during the conference. Consider having supplemental information by your poster (e.g., reduced copies of the

poster, business cards, printed abstracts, etc.). Three good sites that help with ideas for preparing posters are:  
<http://www.ncsu.edu/project/posters/IndexStart.html>  
<http://edu.medsci.uu.se/occmed/poster/default.htm>  
<http://www.tss.uoguelph.ca/lrc/TGuides/EPDfinal.pdf>

## Mounting

Posters will be displayed on 8-foot wide by 4-foot high **poster boards** with a 2-inch border (interior dimensions are approximately 92" wide by 46" high). **Push pins** for mounting your poster will be available.

## Dimensions

Each poster should be no more than 92 inches (233 cm) wide and 46 inches (116 cm) high and no less than 60-inches (152cm) wide and 36-inches (91cm) high (posters smaller than this size are not readable).

## Special Requests for Your Display Space

**Early notification (on or before 2 September) of special needs and coordination with conference organizers is very important!** Please fill out the form available at

<http://www.erf.org/user-cgi/erf05posterform.pl>

- Electrical supply (standard, 120-volt) can be provided to your space upon request but requires an additional fee. Power-access constraints may apply.
- Presenters will be responsible for providing their own computers, projectors, screens, electrical adapters, extension cords, power strips, surge protectors, etc.
- Tables are available upon request, but may require an additional fee.
- Internet connections may be made available for a substantial additional fee and will require coordination with conference organizers.

## Additional Considerations/ Recommendations

- Provide a schedule of times you (or someone else) will be available at your poster for questions or for providing additional information, in addition to your assigned presentation day/time.
- Make yourself available during the conference for follow up discussions.
- Provide preprinted abstracts with contact information.
- Bring a good supply of business cards.

- Please assemble and remove your poster on time. We cannot be responsible for its disposition.
- The Conference Center provides security and the poster hall will be locked after **9:00 p.m.** However, presenters should plan to remove their posters and all related objects by 8:15 p.m. at the end of their presentation day.

## Workshop Information

### 1. Scientific Publishing Panel

Convener: Stephen Threlkeld, *Estuaries and Coasts* Managing Editor  
 Date and Time: Sunday, October 16,  
                   10:30 a.m. - 12:30 p.m.  
 Location: Marriott Norfolk Waterside Convention Center, first floor,  
                   Norfolk Ballroom, section 2.

A **panel of authors, reviewers and editors** will address central issues of getting your manuscript published in *Estuaries*. Highlights will include what to do with negative reviews, how to present material in figures and tables, how to avoid the trap of dual publication, and how to recognize who should be an author on your paper.

### 2. Putting Your Science to Work

A career-planning workshop for graduate students and post-docs in all fields of science.

Presented by: Dr. Peter S. Fiske,  
[www.agu.org/careerguide/](http://www.agu.org/careerguide/)  
 Date and Time: Sunday, October 16,  
                   2:00 p.m. - 4:00 p.m.  
 Location: Marriott Norfolk Waterside Convention Center, first floor,  
                   Norfolk Ballroom, section 2.  
 Cost: \$20.00 per person  
 Advance payment via the registration form is recommended.

Dr. Fisk: "Young scientists in nearly every field are finding today's job market a confusing and frustrating place. More new Ph.D.s, post-docs and Master's degree holders are considering a wider range of careers in and out of science, but feel ill prepared and uninformed about their options. Some feel their Ph.D. training has led them to a dead-end."

In this workshop, I present a thorough and practical overview to the process of career planning and job-hunting in today's job market, from the perspective of a young scientist. I cover specific steps that young scientists can take to broaden their horizons, strengthen their skills, and present their best face to potential employers. An important part of this is the realization that most young scientists possess a range of valuable "transferable skills" that are highly sought after by employers in and out of science. I also cover all the specifics of job hunting, including informational interviewing, building your network, developing a compelling CV and resume, cover letters, interviewing, and more. With each topic I discuss the particular challenges and opportunities faced by those with an advanced degree in science. My workshop is up-beat in tone and positive in outlook."

### **3. Multiparameter, High Speed Sampling:**

*Synoptic, spatially intensive sampling of biological and water quality parameters in fresh, coastal and marine waters.*

Convener: Chris Madden, cmadden@sfwmd.gov  
 Date and Time: Sunday, October 16,  
 2:30 p.m. – 4:30 p.m.  
 Location: Marriott Norfolk Waterside  
 Convention Center, first floor,  
 Norfolk Ballroom, section 1

This workshop will explore the opportunities and challenges of high-speed sampling of multiple parameters from moving vessels using sensor arrays. The methodologies, limitations, and advantages of this kind of sampling will be discussed. Wide participation from



Virginia Beach's Back Bay National Wildlife Refuge appeals to nature enthusiasts of all ages. Photo courtesy Virginia Beach Convention & Visitors Bureau.

the user community is invited, to offer case studies and war stories from a variety of diverse conditions.

Some of the topics to be considered include optimal grid patterns for spatial sampling; sampling in variable environments, such as strongly tidal systems; available and emerging sensor technologies; improvements to the "nuts and bolts"; statistical treatments - how to mine all that data; geospatial analyses; time series and repeated measures; requirements of discreet sample collection for meaningful calibrations; multivariate analysis. Connections to remote sensing techniques in complementary and support modes may be examined. User community needs and visions will be discussed.

### **4. Modeling Waves and Their Impacts On Nearshore Habitats**

Convener: Brad Robbins, robbins@mote.org  
 Date and Time: Monday, October 17,  
 6:45 p.m. – 8:00 p.m.  
 Location: Marriott Norfolk Waterside  
 Convention Center,  
 fourth floor ballroom, section 1

Although waves have been recognized as important structural modifiers on the open coast, only recently have we begun to model their dynamics within estuaries, especially in terms of how they influence habitat/ecosystem function and restoration success. The objective of this group is to use /in situ/ data to develop realistic and spatially explicit wave models to explore the influences of both natural and anthropogenically derived waves (e.g. boat wakes).

Our efforts also entail developing protocols for measuring waves for subsequent model development. The group is diverse in both their affiliations and areas of expertise. We represent local, state, and federal agencies, universities, and for-profit and not-for-profit labs. Our areas of expertise include modelers, engineers, biologists, ecologists, managers, oceanographers, and others. We invite any and all to join us if interested.

# Special Meeting & Social Function Descriptions

Please see **Page 5** for the complete schedule (Workshop descriptions are on **Page 18**)

## President's Welcome Reception

Sunday, October 16 ..... 7:00 p.m. - 9:00 p.m.  
Sheraton Norfolk Waterside, Ballroom, third floor

Come meet, eat and drink with the Estuarine Research Federation presidents and the rest of the ERF Governing Board. Celebrate the opening of the 18th biennial conference of the Estuarine Research Federation.

## Affiliate Society Meetings

Monday, October 17 ..... 6:00 p.m. - 7:00 p.m.  
Marriott Norfolk Waterside Convention Center,  
Ballroom, first floor

This year we have set aside a specific time for all of the affiliate society meetings. Plan to attend your region's meeting to learn what is happening!

## ERF Student Career Event

Monday, October 17 ..... 7:00 p.m. - 8:00 p.m.  
Sheraton Norfolk Waterside, Monticello Room,  
first floor

A long-standing ERF tradition, this event not only offers free food and drink, but also provides students a great

opportunity to network with established scientists and recently employed graduates. This is your chance to pick their brains about topics such as career options, student internship and employment opportunities, and job search tools and skills that worked successfully for them. All undergraduate and graduate students are invited.

## NOAA Town Hall Meeting

*Research Directions for NOAA: Near- and Long-term Perspectives*

Monday, October 17 ..... 8:00 p.m. - 9:30 p.m.  
Marriott Norfolk Waterside Convention Center,  
Ballroom, first floor, section 3

We welcome colleagues from the entire research community to attend this town hall to discuss the future direction of NOAA's research activities as captured in the 5-year Research Plan and 20-year Research Vision. Members of NOAA's Research Council, which in consultation with the research community developed these documents, will present an overview of their contents, focusing particularly on the area of ecosystems research. Time will be allotted for discussion with and questions from the audience.

## Visions II —ERF Town Meeting

Tuesday, 18 October 2005 • 6:00 p.m. - 7:00 p.m.  
Marriott Norfolk Waterside Convention Center, Ballroom, first floor

- How can the Federation members best fulfill our mission?
- How will scholarly publication change when open-access to journals becomes a reality?
- How will changing demographics and the globalization of the science community affect membership trends in scientific societies?
- What roles should scientific societies or their members play in enhancing the role of science in policy development?

These are some of the questions ERF Governing Board members have been asking themselves during nearly two years of research and discussions as we prepare a new report on the Federation's future entitled Visions II.

The Governing Board members cordially invite you to attend a town meeting where you will have the opportunity to share your perspectives on the visions, goals and strategies we are formulating in a plan that will guide the Federation's activities for the next few years.

Members of the Governing Board and journal leaders will host this meeting. The discussions will take place in small groups in an informal atmosphere. Individual Board members will highlight some of the ideas that they have developed and will welcome your constructive responses. We look forward to exchanging views with all members about these important trends and decisions.

## **Women's Aquatic Network Breakfast**

Tuesday, October 18 ..... 7:00 a.m. - 8:00 a.m.  
Sheraton Norfolk Waterside, Monticello Room, first floor

Cost: \$20.00 per person regular fee or \$14.00 per person  
student fee

Advance payment via the registration form  
is recommended.

This popular ticketed program features discussions of careers and life choices of women in aquatic sciences. Students have ample opportunities to interact with the speakers and with other professionals attending. This year we are pleased to have guest speaker Cynthia Suchman, Assistant Director of the Virginia Sea Grant College Program. Another speaker, to be determined, will join Cynthia.

## **Observing Systems Room**

Tuesday, October 18 ..... 8:00 a.m. - 6:00 p.m.  
Marriott Norfolk Waterside Convention Center,  
4th Floor Ballroom, section 1

Observing systems represent a new and extremely significant contribution to our abilities to understand and manage natural resources and the interrelationships between humans and their environment. Coastal ecosystems are receiving particular attention as these systems are designed and implemented. The design and implementation are occurring rapidly and at local, national, regional and global scales. We will have a room devoted solely to observing systems on Tuesday from



Surfers compete for a wave at the Virginia Beach East Coast Surfing Championships.  
Photo courtesy Virginia Beach Convention & Visitors Bureau.

8:00 am – 6:00 p.m. on the 4th floor of the Marriott. We have invited observing systems within the United States and internationally and related organizations to display posters, provide informational materials and make available representatives to discuss their efforts. You are welcome to stop by and learn more about what is happening in this exciting arena.

## **Nauticus Reception**

Tuesday, October 18 ..... 7:00 p.m. - 10:00 p.m.  
Ticketed Event - \$35.00 per person  
Advance payment via the registration form  
is recommended.

The ERF 2005 conference Tuesday evening dinner and social event, cosponsored by **The Federation, NOAA Chesapeake Bay Office and Old Dominion University, Ocean, Earth and Atmospheric Sciences**, will be located at the Nauticus, National Maritime Center. Located only a few blocks from the conference hotels (Marriot and Sheraton) on the downtown waterfront of Norfolk, the Nauticus is an exciting 120,000 square-foot Maritime-themed science and technology center, exploring the economic, naval, and natural power of the sea.

## **The Boat, The Boat!!**

During the Nauticus Reception, step outside to visit Old Dominion University's new 55-foot research vessel, the R/V Fay Slover. She will be open for tours and maybe even a boat ride. Meanwhile, visit her website at <http://web.odu.edu/ao/instadv/quest/rvfayslover.html>



For the fishing enthusiast, Virginia Beach offers 4 piers from which to cast a line. The Virginia Beach Fishing Pier located on 15th Street features souvenir shops, a restaurant and a great place to view the oceanfront Boardwalk. Photo courtesy Virginia Beach Convention & Visitors Bureau.

## **ERF Business Meeting and Administration Change**

Wednesday, October 19 ..... 6:00 p.m. – 7:00 p.m.  
 Marriott Norfolk Waterside Convention Center, first floor Ballroom, section 3

- Linda C. Schaffner, Federation President, presiding
- Welcome
- Retiring Officer's recognition and service awards
- Introduction of the Christian administration
- Changing of the Guard - Robert Christian, President, 2005-2007
- Treasurer's Report - Carolyn Keefe
- Estuaries Journal Report - Scott W. Nixon and Carlos Duarte, Co-Editors-in-Chief and Stephen T. Threlkeld, Managing Editor
- Membership Report - Joy A. Bartholomew, Executive Director

## **NERRS Graduate Student Reception**

Wednesday, October 19 ..... 6:30 p.m. – 8:00 p.m.  
 Nauticus, National Maritime Center, near the Center's aquarium

For more information on the Graduate Research Fellowship program please visit their website at <http://nerrs.noaa.gov/Fellowship/welcome.html>

## **VIMS Alumni, Faculty and Student Reception**

Wednesday, October 19 ..... 7:00 p.m. – 9:00 p.m.  
 Norfolk Southern Building, 3 Commercial Place (across the street from the ERF Conference)

Sponsored by the **Norfolk Southern Corporation**, this event will be chock full of good food, drink, conversation and fun! Come see old friends and make new ones!! RSVP by September 15, 2005, at 804-684-7099 or via e-mail to [page@vims.edu](mailto:page@vims.edu).

## **Horseshoe Crab Forum**

Wednesday, October 19 ..... 7:00 p.m. – 9:00 p.m.  
 Marriott Norfolk Waterside Convention Center, 4th Floor

Dr. Ruth Carmichael has arranged this informal forum. Come for suds, snacks and ruminations!

## **Student Awards Reception**

Thursday, October 20 ..... 6:00 p.m. – 8:00 p.m.  
 Sheraton Norfolk Waterside, Ballroom, third floor

Throughout this week our volunteer judges (3 per presentation) evaluated most of the student oral and poster presentations. Tonight, the highest ranking students receive monetary awards and recognition for their exceptional work. Come support the students, and of course, eat, drink and be merry!



Subsidence in the high marsh at Upper Philips Creek Marsh, Virginia Coast Reserve Long Term Ecological Research, Eastern Shore, Virginia. Photo by Linda Blum.

# Notes

# List of Sessions

## Symposia

- SYM-01** Use of Observing Systems for Understanding, Monitoring and Predicting Harmful Algal Blooms and Hypoxia.
- SYM-02** Coastal Invasive Species: Impacts, Management and the Role of Modified Habitats.
- SYM-03** Examining Nutrient Enrichment Effects on Coastal Ecosystems through Comparative Ecological Approaches and Perspectives.
- SYM-04** Observing the Coastal and Ocean Environment: Developments in Sensor Technology and the Use of Long-Term Data Sets for Operational Ecology.
- SYM-05** Connecting Estuarine and Great Lakes Health and Human Health.
- SYM-06** Managing River Basins and Estuaries: an International Assessment of Approaches and Progress.

## Special Sessions

- SPS-01** Retention of Nutrients in Littoral Zone Systems with Different Physical Regimes.
- SPS-02** Restoring and Protecting the World's Estuaries – Comparing Exemplary Programs.
- SPS-03** Atmospheric Inputs of Nutrients and Contaminants to Estuaries.
- SPS-04** Identifying, Assessing, and Managing Human and Climatically-Induced Change of Estuarine Ecosystems.
- SPS-05** Developing Useful Modeling and Mapping Tools to Help Managers Address Sea Level Rise.
- SPS-06** Observational and Modeling Studies of Shellfish Responses to Climate Variability.
- SPS-07** Sustainability and Wildlife Management in Coastal Wetlands.
- SPS-08** Truth and Consequences in Interdisciplinary Studies.
- SPS-09** Adapting and Transferring Science to Managers – Research, Case Studies and Connections.
- SPS-10** Developing Science-Based Information for Coastal Decision Making.
- SPS-11** Research Challenges Resulting from EMAP/NCA National Surveys.
- SPS-12** Historic and Current Use and Management of Estuarine Environments by Indigenous, Multi-Generational Colonizers and Pre-Industrial People in Western Atlantic Nations.
- SPS-13** Observing and Forecasting Systems for Urban and Coastal Ocean Environments.
- SPS-14** Temporal and Spatial Changes Within and Among Coastal Ecosystems.
- SPS-15** Physical and Biological Factors Affecting Horseshoe Crab Abundance and Distribution in Coastal Waters.
- SPS-16** Food Limitation in Estuarine Fauna.
- SPS-17** Ecological Indicators of Estuarine Change and Condition.
- SPS-18** Estuarine Fish Behavior: What Can the Fish Themselves Tell Us About Essential Fish Habitat?
- SPS-19** Innovative Techniques for Assessing Fish and Invertebrate Habitat Linkages in Estuaries and Coastal Systems.
- SPS-20** Ecosystem-Based Management.
- SPS-21** Indices to Evaluate Estuarine Health.
- SPS-22** Estuaries and Ecological Forecasting: Are we making progress?
- SPS-23** Geomorphic Features and Ecosystem State Change: Examples from Mangroves and Salt Marshes.
- SPS-24** Ecological Assessment of Water Quality, Living Resources and Habitats of Coastal Lagoons.
- SPS-25** Coral Diseases: An Increasing Threat to Coral Reefs Worldwide.
- SPS-26** Interactions through Estuarine Hydrology.
- SPS-27** Recruitment Processes in Estuarine Fishes.
- SPS-28** Interdisciplinary Approach to Research in Tropical Seagrass and Mangrove Ecosystems.

- SPS-29** Hydrodynamics of Coral Reefs and Seagrass Beds: Implications for Ecological Function, Management and Restoration.
- SPS-30** Estuarine Science at Primarily Undergraduate Institutions: Opportunities for Teaching and Research.
- SPS-31** Estuarine Exchange and Innovative Technology.
- SPS-32** Utility of Residence Time and Related Concepts in Estuarine Studies.
- SPS-33** Impact of Direct Groundwater Inputs to Estuarine Studies.
- SPS-34** Assessment and Management of PAH Contaminated Sediments.
- SPS-35** Extreme Sediment Biogeochemistry: Observational and Experimental Results from Hypereutrophic Ecosystems.
- SPS-36** Physical and Biogeochemical Processes in the Albemarle-Pamlico Estuarine

## Contributed Sessions

- CPS-01** Ecosystems and Trophic Dynamics.
- CPS-02** Population and Community Dynamics.
- CPS-03** Environmental Physiology and Behavior.
- CPS-06** Fish Ecology and Fisheries.
- CPS-07** Habitat and Habitat Selection.
- CPS-08** Biogeochemistry (organic and inorganic).
- CPS-09** Nutrients.
- CPS-10** Estuarine Sediment Dynamics and Morphodynamics.
- CPS-11** Hydrodynamics of Estuaries.
- CPS-13** Impacts of Climate Variability.
- CPS-14** Physical and Biological Interactions.
- CPS-17** Patterns, Response and Management Implications to Large-Scale Phenomena.
- CPS-20** Scientist-Community Group Interactions in Restoration Efforts for Estuaries and their Watersheds.

## Chesapeake Bay Colloquium

- COL-21** **Plenary:** What's the future for the Chesapeake: A model for other estuaries?
- COL-01** Estuaries Under Siege: Options for the Future.
- COL-02** Estuarine Implications of the Impending Shift in Estuarine Food Production.
- COL-03** Productivity and Diversity of Estuarine Plankton and Fish Resources: Scale-Dependent Interactions from Watershed to Sea.
- COL-04** Integrated Observing Systems and their Applications.
- COL-05** Managing our Lands for Reducing Loads.
- COL-06** Challenges to & Prospects for Large Marine Ecosystem-based Fisheries Management.
- COL-07** Waterbirds of the Chesapeake Bay and Vicinity: Harbingers of Change.
- COL-08** Innovative Technological Applications for Science and Management in the Basin.
- COL-09** Managing the Bay: Meeting the Mandates of *Chesapeake 2000*.
- COL-11** Basin Eutrophication and Public Health.
- COL-12** Harmful Algal Blooms in the Chesapeake Bay and Coastal Bays.
- COL-13** New Understandings in HABs and Other Plankton, Benthos and Nekton from the Chesapeake.
- COL-14** Ecosystem-Based Approaches to Management and Restoration of Estuarine Fisheries.
- COL-15** Basin Modeling for Research and Management.
- COL-16** Identifying Priorities for Legislative and Executive Activity in Basin Restoration.
- COL-17** Innovation in Agriculture Conservation for the Chesapeake Bay.
- COL-18** The Importance of Non-Tidal Lands and Waters in Basin Dynamics.
- COL-19** Benthic-Pelagic Couplings and Managing Dissolved Oxygen in the Chesapeake and Coastal Bays.
- COL-20** Restoration in Highly Urbanized Estuaries.

# Personal Schedule

	<b>Sunday</b> 16 October	<b>Monday</b> 17 October	<b>Tuesday</b> 18 October
7:00 AM			
8:00 AM			
9:00 AM			
10:00 AM			
11:00 AM			
12:00 Noon			
1:00 PM	<b>Registration Opens</b>	<b>Poster Sessions</b> Marriott, 3rd Floor	<b>Poster Sessions</b> Marriott, 3rd Floor
2:00 PM			
3:00 PM			
4:00 PM			
5:00 PM	<b>Plenary &amp; Awards</b> Marriott Ballroom, 1st Floor		
6:00 PM		<b>Affiliate Societies</b> Marriott, 1st Floor	<b>ERF Town Hall Meeting</b> Marriott, 1st Floor
7:00 PM	<b>Presidents Welcome Reception</b> Sheraton Ballroom, 3rd Floor	<b>Student Career Event</b> Sheraton, Monticello Room	<b>Nauticus Reception</b> One Waterside Drive
8:00 PM			
9:00 PM			

<b>Wednesday</b> 19 October	<b>Thursday</b> 20 October	<b>Friday</b> 21 October	
			7:00 AM
			8:00 AM
	<b>Colloquium Plenary</b> Marriott 1st Floor	<b>Chesapeake Bay Colloquium</b> Marriott, first floor	9:00 AM
			10:00 AM
			11:00 AM
			12:00 Noon
<b>Poster Sessions</b> Marriott, 3rd Floor	<b>Poster Sessions</b> Marriott, 1st Floor		1:00 PM
			2:00 PM
			3:00 PM
			4:00 PM
			5:00 PM
			6:00 PM
			7:00 PM
<b>ERF Business Meeting</b> Marriott, 1st Floor			8:00 PM
			9:00 PM

# Monday Oral Sessions At-A-Glance

	<b>Marriott M1</b>	<b>Marriott M2</b>	<b>Marriott M3</b>	<b>Marriott M4</b>	<b>Marriott M5</b>
	<b>SPS-24 Coastal Lagoon Assessments</b>	<b>SPS-06 Shellfish Response Studies</b>	<b>SPS-01 Littoral Zone Nutrients</b>	<b>SPS-10 Coastal Decision Making</b>	<b>CPS-06 Fish Ecology &amp; Fisheries</b>
8:00-8:15	Jesien	Weiss	Huettel	Burgan	Mclvor
8:15-8:30	cont.	Zarnoch	cont.	Kiddon	Cohen
8:30-8:45	Kennish	Kraeuter	Anderson	McRae	Stunz
8:45-9:00	Herrera-Silveira	Hofmann	Lawson	Jutte	Nanez-James
9:00-9:15	Christian	Christman	S. Nielsen	Macaulay	Becker
9:15-9:30	Hall	North	Patterson	Ranasinghe	Lucy
9:30-9:45	Mutchler	Banas	Berg	O'Connor	Poster summaries
<b>9:45-10:15</b>	<b>BREAK</b>				
	<b>SPS-24 cont.</b>	<b>SPS-06 cont.</b>	<b>SPS-01 cont.</b>	<b>SPS-10 cont.</b>	<b>CPS-06 cont.</b>
10:15-10:30	Camacho-Ibar	Powell	Cornwell	Harvey	Morley
10:30-10:45	Cole	Bushek	Fossing	Hyland	Elsdon
10:45-11:00	Gao	Soniat	Giblin	Kopp	Allen
11:00-11:15	Sturgis	WetHEY	Parker	Slater	van Montfrans
11:15-11:30	Boyer	Struski	Gardner	Sharp	Burton
11:30-11:45	Hernandez-Ayon	*	Sundback	Heatwole	Slacum
11:45-12:00	Aveytua-Alcazar	*	Poster summaries	Poster summaries	Poster summaries
<b>12:00 - 2:00</b>	<b>POSTER SESSIONS and LUNCH</b>				
	<b>SPS-24 cont.</b>	<b>SPS-21 Estuarine Health Indices</b>	<b>SPS-01 cont.</b>	<b>SPS-10 cont.</b>	<b>SPS-18 Estuarine Fish Behavior</b>
2:00-2:15	Poster summaries	Wilson	Burton Evans	Short	Rountree
2:15-2:30	Orth	cont.	Stanaway	Fitzpatrick	Rand
2:30-2:45	Wilcox	Dauer	Zimmerman	Li	Freund
2:45-3:00	Marion	McLusky	O. Nielsen	Hunt	van de Wetering
3:00-3:15	Durako	Nelson	Holyoke	Arnold	Young
3:15-3:30	Lasi	Elliott	Tyler	Hanson	Goetz
3:30-3:45	Murphy	Bartoli	Voss	Scarborough	Fabrizio
<b>3:45-4:15</b>	<b>BREAK</b>				
	<b>SPS-23 Geomorph. &amp; Ecosys. State Change</b>	<b>SPS-21 cont.</b>	<b>SPS-01 cont.</b>	<b>SPS-10 cont.</b>	<b>SPS-12 Indigenous, Multi-Generational Colonizers</b>
4:15-4:30	Twilley	Buchanan	Haese	Hastie	Wolf
4:30-4:45	Spicer	Schaffner	Chick	Perez	Bromberg
4:45-5:00	Reed	Lacouture	McMillan	Vandenburgh	Begossi
5:00-5:15	LeMay	Poster summaries	Torres	Pelletier	Martinez
5:15-5:30	Torres	Chairs' discussion	Poulin	Green	Aswani
5:30-5:45	Oertel	cont.	Dailey	Farris	Kimbrough
5:45-6:00	Brinson	cont.	Dunton	Fell	*
	Currin (6:00)				

Marriott M6	Sheraton Poplar Hall	Sheraton Providence Hall	Sheraton Stratford Hall	Sheraton York Hall	
CPS-11 <b>Hydrodynamics</b>	SPS-08 <b>Interdisciplinary Studies</b>	SYM-05 Estu. & Gt. Lakes Human Health	SPS-14 Temporal & Spatial Changes	SPS-04 Identify & Assess Change	
Salas-Monreal O'Donnell Framiñan Hao Möller Mied Poster summaries	King Palmer-Moloney Ferrier Reiter Clough Weinstein *	Sandifer Garrett O'Neill Ylitalo Kucklick Fulton Scholz	Ulanowicz cont. Scharler Asmus de Jonge Baird G. Johnson	Cronin cont. Hilton Harding, Jr. W. Miller Kimmel Poster summaries	8:00-8:15 8:15-8:30 8:30-8:45 8:45-9:00 9:00-9:15 9:15-9:30 9:30-9:45
<b>BREAK</b>					<b>9:45-10:15</b>
CPS-11 cont.	SYM-04 Observing the Coast	SYM-05 cont.	SPS-14 cont.	SPS-04 cont.	
Whipple Mansfield Simons Chen Angulo Han Narváez	Hemsley cont. Mazzilli Sullivan Devol Caffrey Poster summaries	Blanch Stewart Rose Paranjpye DePaola Chatzidakis-Livanis Brown	Heymans Luczkovich J. Johnson Livingston Harris Madley Poster summaries	Redalje Testa Arhonditsis Valdes-Weaver Adolf Peierls Poster summaries	10:15-10:30 10:30-10:45 10:45-11:00 11:00-11:15 11:15-11:30 11:30-11:45 11:45-12:00
<b>POSTER SESSIONS and LUNCH</b>					<b>12:00 - 2:00</b>
SPS-32 Utility of Residence Time	SYM-04 cont.	SYM-05 cont.	SPS-14 cont.	SPS-04 cont.	
Aikman cont. MacCready Geyer Chadwick Lipphardt Jr. Small	Martin O'Donnell Tenore Tamburri Luther Michael Quintrell	Rein Bricelj Dyble Lefebvre Kirkpatrick Gulland Schwacke	Murrell Wynne Ji Hyde Craft Maiaro Kraatz	Howarth cont. Burger Piehler Childers Morris Hampel	2:00-2:15 2:15-2:30 2:30-2:45 2:45-3:00 3:00-3:15 3:15-3:30 3:30-3:45
<b>BREAK</b>					<b>3:45-4:15</b>
SPS-32 cont.	SYM-04 cont.	SYM-05 cont.	Open	SPS-04 cont.	
Prandle Dettmann Sheldon Flannery Bricker Poster summaries Chairs' discussion	Trueblood Mooney Chekalyuk Mitchell Kelly Klemas Field	Dobson Loge Straub DiDonato Varanasi Brandt Holland	*	Day Muth Thom Zieman Demopoulos Tomasko Fries	4:15-4:30 4:30-4:45 4:45-5:00 5:00-5:15 5:15-5:30 5:30-5:45 5:45-6:00

# Tuesday Oral Sessions At-A-Glance

	<b>Marriott M1</b>	<b>Marriott M2</b>	<b>Marriott M3</b>	<b>Marriott M4</b>	<b>Marriott M5</b>
	<b>Open</b>	<b>CPS-03 Physiology and Behavior</b>	<b>SPS-27 Estuarine Fish Recruitment</b>	<b>SPS-26 Estuarine Hydrology</b>	<b>CPS-14 Physical &amp; Biological Interactions</b>
8:00-8:15	*	Biber	Cowan	Chairs' introduction	Smith
8:15-8:30	*	Belshe	Martino	Poster summaries	Roelke
8:30-8:45	*	Wijte	Taylor	Forbes	Francisco
8:45-9:00	*	DeLorenzo	Quinlan	Pae	Saunders
9:00-9:15	*	Joyner	Miller	Mashriqui	Virnstein
9:15-9:30	*	Islam	Wuenschel	Kemp	Troxler-Gann
9:30-9:45	*	Poster summaries	Patterson	Lee	Poster summaries
<b>9:45-10:15</b>	<b>BREAK</b>				
	<b>SPS-02 Restore &amp; Protect Estuaries</b>	<b>SPS-11 Research Challenges from Surveys</b>	<b>SPS-27 cont.</b>	<b>SPS-26 cont.</b>	<b>CPS-14 cont.</b>
10:15-10:30	Chang-Hee	McDonald	Rooker	Rudnick	Kibler
10:30-10:45	Glamore	Weisberg	Searcy	Marshall	Hoeppner
10:45-11:00	Williams	Van Dolah	Luthy	Smith III	Temmerman
11:00-11:15	Mallin	Genthner	Stewart	Vlaar	Bergstrom
11:15-11:30	Eckenrod	Walker	Tuomikoski	(open)	Dorgan
11:30-11:45	Traber	Collins	Moser	Hunt	Morzarria-Luna
11:45-12:00	Deis	Engle	Kraus	Haunert	Poster summaries
<b>12:00 - 2:00</b>	<b>POSTER SESSIONS and LUNCH</b>				
	<b>SPS-34 PAH Contaminated Sediments</b>	<b>SPS-33 Groundwater Inputs</b>	<b>SPS-27 cont.</b>	<b>SPS-05 Modeling &amp; Mapping Tools</b>	<b>SPS-30 Undergraduate Estuarine Science</b>
2:00-2:15	Rice	Simonds	Clarke	Torres	Huzzey
2:15-2:30	cont.	Kroeger	Candelmo	van Proosdij	Rhode
2:30-2:45	Culbertson	Hays	Litvin	Sklar	Bankey
2:45-3:00	Collier	Dale	Del Toro-Silva	Doyle	Cuker
3:00-3:15	Di Giulio	Mir-Gonzalez	Glass	Kolker	Paul
3:15-3:30	Poster summaries	Volk	Meyer	Z. Johnson	Albaugh
3:30-3:45	(open)	*	Overton	Strange	Jivoff
<b>3:45-4:15</b>	<b>BREAK</b>				
	<b>SPS-34 cont.</b>	<b>SPS-03 Atmospheric Inputs</b>	<b>SPS-27 cont.</b>	<b>SPS-05 cont.</b>	<b>SPS-30 cont.</b>
4:15-4:30	Incardona	Paarl	T.Wyllie-Echeverria	Feyen	Dame
4:30-4:45	Kane Driscoll	cont.	Targett	Street	Fuller
4:45-5:00	Watts	Poor	Craig	Kenworthy	Stribling
5:00-5:15	Runcie	Kieber	Brady	Rybczyk	T. Jones
5:15-5:30	Menzie	Ullman	Jung	Luscher	*
5:30-5:45	*	Avery	Kowalski	Nuttle	*
5:45-6:00	*	Dickhut	*	Rasser	*

<b>Marriott M6</b>	<b>Sheraton Poplar Hall</b>	<b>Sheraton Providence</b>	<b>Sheraton Stratford</b>	<b>Sheraton York Hall</b>	
<b>CPS-10 Sediment Dynamics</b>	<b>SPS-28 Tropical Seagrasses &amp; Mangroves</b>	<b>SYM-06 River Basins &amp; Estuaries</b>	<b>SYM-03 Nutrient Enrichment Effects</b>	<b>SPS-17 Ecological Indicators</b>	
Souza Traynum Saal Kim Chu Sanford Poster summaries	McKee Carruthers Joye Koch Rivera-Monroy Boettcher Berger	Dowell Claussen Davis Magnien Brush Buddemeier Newton	Valiela cont. Alber Osher Kaldy Cebrian Poster summaries	Brown-Peterson Cheek Murphy Sokolowski Jordan Vieira Rakocinski	8:00-8:15 8:15-8:30 8:30-8:45 8:45-9:00 9:00-9:15 9:15-9:30 9:30-9:45
<b>BREAK</b>					<b>9:45-10:15</b>
<b>CPS-10 cont.</b>	<b>SPS-28 cont.</b>	<b>SYM-06 cont.</b>	<b>SYM-03 cont.</b>	<b>SPS-17 cont.</b>	
Fleming Snedden Nitsche Shen Dellapenna Foyle Poster summaries	Lovelock Feller Gallegos Teichberg Fourqurean Borgatti Poster summaries	Ferreira Bricker R. Smith Valiela Lipton Wazniak Stacey	Frankovich Goebel Hagy MacIntyre Lewitus Ramanathan Poster summaries	Wagner Allison (open) Brazner Davey Wigand Poster summaries	10:15-10:30 10:30-10:45 10:45-11:00 11:00-11:15 11:15-11:30 11:30-11:45 11:45-12:00
<b>POSTER SESSIONS and LUNCH</b>					<b>12:00 - 2:00</b>
<b>SPS-29 Coral Reefs &amp; Seagrass Beds</b>	<b>SPS-20 Ecosystem- Based Management.</b>	<b>SYM-06 cont.</b>	<b>SYM-03 cont.</b>	<b>SPS-17 cont.</b>	
S.Wyllie-Echeverria Lacy Koch Chen Presto Burke Di Carlo	Wetzel cont. Lucas Kremer Brush Cerco Madden	Greening Powell Sane Chairs' discussion cont. * *	Warren Bowen York Keller K. Smith Lehrter Montagna	Watson Stankelis Williams Anastasiou Rismondo Stevenson Perry	2:00-2:15 2:15-2:30 2:30-2:45 2:45-3:00 3:00-3:15 3:15-3:30 3:30-3:45
<b>BREAK</b>					<b>3:45-4:15</b>
<b>Synthesis 1</b>	<b>SPS-20 cont.</b>	<b>SPS-16 Food Limitation</b>	<b>SYM-03 cont.</b>	<b>SPS-17 cont.</b>	
<i>Interactions with Estuarine Physics</i>	Gregg (open) Simenstad Sobociński Borde Buzzelli Burke	Peterson Levinton Pierson Thompson Luckenbach Lovvorn Kimmerer	Carmichael Chesney Deegan Josefson Breitburg Brush Latimer	Burkholder Nuzzi Pinckney Waggener Pospelova * *	4:15-4:30 4:30-4:45 4:45-5:00 5:00-5:15 5:15-5:30 5:30-5:45 5:45-6:00

# Wednesday Oral Sessions At-A-Glance

	<b>Marriott M1</b>	<b>Marriott M2</b>	<b>Marriott M3</b>	<b>Marriott M4</b>	<b>Marriott M5</b>
	<b>CPS-07 Habitat &amp; Habitat Selection</b>	<b>SPS-19 Habitat Linkage Techniques</b>	<b>CPS-01 Ecosystems &amp; Trophic Dynamics</b>	<b>CPS-02 Population &amp; Community Dynamics</b>	<b>SPS-22 Estuaries &amp; Ecological Forecasting</b>
8:00-8:15	Crona	Skilleter	Baustian	Grove	Matlock
8:15-8:30	MacDonald	Toft	Condon	Crain	cont.
8:30-8:45	Gossman	Seitz	Booth	Schile	Scavia
8:45-9:00	Hagan	Beamer	West	Proffitt	cont.
9:00-9:15	Zeug	Bilkovic	Beseres	Zahn	Carey
9:15-9:30	Krimsky	McDonald	Howe	Apodaca	Sunda
9:30-9:45	Long	Turner	Galvan	Traut	Longstaff
<b>9:45-10:15</b>	<b>BREAK</b>				
	<b>CPS-07 cont.</b>	<b>SPS-19 cont.</b>	<b>CPS-01 cont.</b>	<b>CPS-02 cont.</b>	<b>SPS-22 cont.</b>
10:15-10:30	Bretsch	Leakey	Herzka	Chintala	Zhang
10:30-10:45	Robbins	Gillett	Sullivan	D. Johnson	Maness
10:45-11:00	Rozas	Rodney	Fulford	J. Johnson	Ferguson
11:00-11:15	Holsman	Minello	Wozniak	Maier Brown	Bacher
11:15-11:30	Florido	Scott	Harbeson	Atilla	Baptista
11:30-11:45	Morris	French	Poster summaries	Sheehan	Poster summaries
11:45-12:00	Perry	Wolfe	Poster summaries	Bologna	*
<b>12:00 - 2:00</b>	<b>POSTER SESSIONS and LUNCH</b>				
	<b>SPS-15 Factors Affecting Horseshoe Crabs</b>	<b>SPS-09 Science to Managers</b>	<b>CPS-01 cont.</b>	<b>CPS-02 cont.</b>	<b>SPS-35 Extreme Sediment Biogeochemistry</b>
2:00-2:15	Shuster	Lovelace	Ho	Wisehart	Boynton
2:15-2:30	Pooler	Wilson	Fox	Campbell	Viaroli
2:30-2:45	Chatterji	Feurt	Spivak	Landry	Tucker
2:45-3:00	D. Smith	Riley	Tuxbury	Cibic	Owens
3:00-3:15	Leschen	Pollack	Canuel	Alphin	Jones
3:15-3:30	Brockmann	VanParreren	K. Smith	Dobberfuhl	Fulweiler
3:30-3:45	Jackson	Farrow	Abu Hena	Buck	*
<b>3:45-4:15</b>	<b>BREAK</b>				
	<b>SPS-15 cont.</b>	<b>SPS-09 cont.</b>	<b>CPS-01 cont.</b>	<b>CPS-02 cont.</b>	<b>Synthesis 5</b>
4:15-4:30	Ehlinger	Ramírez-Toro	Lehman	Peterson	<i>Interactions with Observing Systems</i>
4:30-4:45	Botton	Sanger	Juszli	Longval	
4:45-5:00	Chabot	Blake	Wong	Richmond	
5:00-5:15	Barlow	Scerno	Hopkinson	Paterno	
5:15-5:30	Schaller	Chesnes	Gifford	Hewitt	
5:30-5:45	Sweka	Poster summaries	Kolesar	Bustamante	
5:45-6:00	Wakefield	*	V. Johnson	Moody	

Marriott M6	Sheraton Poplar Hall	Sheraton Providence	Sheraton Stratford	Sheraton York Hall	
CPS-20 Scientist-Community Interactions	SYM-02 Coastal Invasive Species	SPS-31 Exchange & Technology	SYM-03 cont. from Tuesday	SYM-01 Observing Sys: HABs & Hypoxia	
Sorabella Woithe Ertel Nemerson Weishar (open) Butzler	Whitlatch cont. Fofonoff Brown Adams Drake Dobbs	Glenn cont. Chant Reinfelder MacDonald Li Janzen	Cicchetti Brawley Russell Libby Oviatt Philippart cont.	Campbell Peterson Kirkpatrick Tomlinson Greenfield Stumpf Trice	8:00-8:15 8:15-8:30 8:30-8:45 8:45-9:00 9:00-9:15 9:15-9:30 9:30-9:45
<b>BREAK</b>					<b>9:45-10:15</b>
CPS-09 Nutrients	SYM-02 cont.	SPS-31 cont.	Open	SYM-01 cont.	
Pauslon Jordan Darby Turner Mulholland Williams Poster summaries	Stanton O'Connell Slack Lorenz Hinkle Ruiz Poster summaries	Fram Sigleo Zhou Scully Reed Chen Huang	*	Lewitus Hall Foreman McGillicuddy Kamer Reynolds Rabalais	10:15-10:30 10:30-10:45 10:45-11:00 11:00-11:15 11:15-11:30 11:30-11:45 11:45-12:00
<b>POSTER SESSIONS and LUNCH</b>					<b>12:00 - 2:00</b>
CPS-09 cont.	SYM-02 cont.	SPS-31 cont.	Open	SYM-01 cont.	
Neubauer Hyfield Holm Jaworski Yarbro Schaefer Johansson	Stepien Mann Bossenbroek Choi Dozier Carlton cont.	Zhao Cutter Hearn Ellison Gibson Cartwright McAllister	*	Gallo Pride Bridgeman Newton Jasinski Culver cont.	2:00-2:15 2:15-2:30 2:30-2:45 2:45-3:00 3:00-3:15 3:15-3:30 3:30-3:45
<b>BREAK</b>					<b>3:45-4:15</b>
CPS-08 Biogeochemistry	Synthesis 3	CPS-13 Climate Variability	Synthesis 4	Open	
Harrison Flewelling E. Smith Anderson Megonigal Condon Luscher	<i>Interactions with Management of Estuarine Systems</i>	Solidoro Diaz-Almela Mendelssohn Purcell Hill Calabretta Poster summaries	<i>Interactions with Estuarine Biology</i>	*	4:15-4:30 4:30-4:45 4:45-5:00 5:00-5:15 5:15-5:30 5:30-5:45 5:45-6:00

# Thursday Oral Sessions At-A-Glance

	Marriott M1	Marriott M2	Marriott M3	Marriott M4	Marriott M5	Marriott M6	Marriott 4th floor, Section 3
	Open	Open	CRC Plenary: Chesapeake's Future	Open	Open	Open	Open
8:00-8:15	*	*	Boesch	*	*	*	*
8:15-8:30	*	*	cont.	*	*	*	*
8:30-8:45	*	*	Hines	*	*	*	*
8:45-9:00	*	*	cont.	*	*	*	*
9:00-9:15	*	*	Simpson	*	*	*	*
9:15-9:30	*	*	cont.	*	*	*	*
9:30-9:45	*	*	Sellner	*	*	*	*
<b>9:45-10:15</b>	<b>BREAK</b>						
	<b>COL-01 Estuaries Under Siege</b>	<b>COL-04 Integrated Observing Systems</b>	<b>COL-02 Food Production Shifts</b>	<b>SPS-07 Sustainability &amp; Wildlife Mgmt.</b>	<b>SPS-25 Coral Diseases</b>	<b>SPS-13 Observing &amp; Forecasting Systems</b>	<b>Synthesis 2</b>
10:15-10:30	Greer	Dallmeier	Zohar	Brockmeyer	A. Bruckner	Bruno	
10:30-10:45	Bonsdorff	Hooper	cont.	cont.	cont.	cont.	<i>Interactions with Estuarine Chemistry</i>
10:45-11:00	Luoma	Dressler	Leber	Nyman	Santavy	Friedrichs	
11:00-11:15	Mee	Ball	cont.	Foret	Rogers	Cheng	
11:15-11:30	Twilley	Atkinson	McVey	Cole	Muller	Meyers	
11:30-11:45	Wong	Boicourt	cont.	Adamowicz	Miller	Xia	
11:45-12:00	*	Piasecki	*	James-Pirri	R. Bruckner	Vincent	
<b>10:15-12:00 Synthesis-2 Interactions with Estuarine Chemistry</b>							
Marriott, Fourth floor ball room, Section 3							
<b>12:00 - 2:00</b>	<b>POSTER SESSIONS and LUNCH</b>						
	<b>COL-19 Benthic-Pelagic Couplings</b>	<b>COL-05 Reducing Loads</b>	<b>COL-06 Large Marine Fisheries</b>	<b>SPS-07 cont.</b>	<b>SPS-25 cont.</b>	<b>SPS-13 cont.</b>	<b>Open</b>
2:00-2:15	Kemp	Parker	Houde	Hood	Davy	Morrison	*
2:15-2:30	Boynton	Benham	cont.	Arrington	Jacobson	Weisberg	*
2:30-2:45	Newell	Randall	Sherman	Thomas	Sussman	Lanerolle	*
2:45-3:00	Brush	Shenk	cont.	Mielcarek	Bythell	Frick	*
3:00-3:15	Shen	Phillips	Sutinen	Rivers	Pantos	Wilson	*
3:15-3:30	Haas	*	cont.	McGuire	Smith	Wall	*
3:30-3:45	Cornwell	*	Summers	Watters	Vargas-Angel	Brubaker	*
	<b>BREAK</b>						
	<b>COL-03 Productivity &amp; Diversity</b>	<b>COL-20 Urban Restoration</b>	<b>COL-06 cont.</b>	<b>SPS-36 Albemarle Pamlico Processes</b>	<b>SPS-25 cont.</b>	<b>SPS-13 cont.</b>	<b>Open</b>
4:15-4:30	Tilburg	Rieger	Malone	Riggs	Sileo	Lohrenz	*
4:30-4:45	Steinberg	cont.	cont.	Mallinson	Sutherland	Vandever	*
4:45-5:00	Roman	Priest	Beal	Cudaback	Cook	Brasseur	*
5:00-5:15	Kimmel	Leggett, Jr.	Uphoff, Jr.	Ames	Richardson	Mulligan	*
5:15-5:30	*	Dauer	Sandifer	Horton	Williams	Barnard	*
5:30-5:45	*	Ludwig	cont.	Poulter	McLaughlin	Piasecki	*
5:45-6:00	*	*	*	*	Woodley	Wilkerston	*

# Friday Oral Sessions At-A-Glance

	Marriott M1	Marriott M2	Marriott M3	Marriott M4
	<b>COL-07 Waterbirds</b>	<b>COL-08 Science &amp; Management Tools</b>	<b>COL-11 Eutrophication &amp; Public Health</b>	<b>COL-15 Basin Modeling</b>
8:00-8:15	*	*	*	*
8:15-8:30	Costanzo	Heyer	*	Gross
8:30-8:45	Forsell	Bowers	Matuszak	cont.
8:45-9:00	Perry	Giordano	Baier-Anderson	North
9:00-9:15	Watts	Chekalyuk	Grattan	Liddel
9:15-9:30	Williams	Stilwell	Oldach	Xu
9:30-9:45	Brinker	Buckley	Simon	Li
<b>9:45-10:15</b>	<b>BREAK</b>			
	<b>COL-07 cont.</b>	<b>COL-09 Managing the Bay</b>	<b>COL-12 HABs</b>	<b>COL-15 cont.</b>
10:15-10:30	Wilson	Batiuk	Marshall	Scavia
10:30-10:45	Boettcher	Townsend	Glibert	Hood
10:45-11:00	Wilke	Naylor	Mulholland	Sisson
11:00-11:15	Watts	Thompson	Place	Lanerolle
11:15-11:30	Swarth	Sweeney	Burkholder	Duffy
11:30-11:45	Kangas	Shenk	Brown	Brakebill
11:45-12:00	Rattner	Staver	Donato	Shenk
<b>12:00 - 2:00</b>	<b>SESSIONS and LUNCH</b>			
	<b>COL-07 cont.</b>	<b>COL-09 cont.</b>	<b>COL-13 New Understandings</b>	<b>COL-16 Restoration Priorities</b>
2:00-2:15	Viverette	Beaman	Wazniak	Preston
2:15-2:30	Llanso	Daub	Boneillo	Pease
2:30-2:45	Beck	Hoffman	Hamdan	Stiles
2:45-3:00	Dueser	Butt	Johnson	Paul
3:00-3:15	Erwin	Claggett	Crump	Burke
3:15-3:30	McKay	Allen	Diaz	*
3:30-3:45	*	Breitburg	*	*
<b>3:45-4:15</b>	<b>BREAK</b>			
	<b>Open</b>	<b>COL-14 Ecosystem-Based Approaches</b>	<b>COL-17 Agriculture Conservation</b>	<b>COL-18 Non-Tidal Lands &amp; Waters</b>
4:15-4:30	*	Latour	Staver	Denver
4:30-4:45	*	Lipcius	Meisinger	Weller
4:45-5:00	*	Paynter	Graves	Havens
5:00-5:15	*	Fulford	Kohn	Rheinhardt
5:15-5:30	*	Christensen	Collins	Brooks
5:30-5:45	*	*	Simpson	*
5:45-6:00	*	*	*	*

# Monday Poster Sessions At-A-Glance

Poster Sessions in the Hampton Roads Ballroom from Noon to 2:00 pm.

Posters are available for viewing from 9:00 pm to 6:00 pm.

This index lists Poster Position followed by name of First Author, not presenting author.

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## **SPS-01**

### **Littoral Zone Nutrients**

- A1 Bala Krishna Prasad
- A2 Marino
- A3 Ren
- A4 Hardison
- A5 Stanhope
- A6 Right
- A7 Poulin
- A8 Holzer

## **SPS-32**

### **Utility of Residence Time**

- A9 Fugate
- A10 Babson
- A11 Burla

## **CPS-11**

### **Hydrodynamics**

- A12 Wilson
- A13 Vitta
- A14 Piñones
- A15 Becker
- A16 Y. Lee
- A17 Carlson
- A18 Riveron-Enzastiga
- A19 Montgomery
- A20 Leung

## **SYM-04**

### **Observing the Coast**

- B1 Moore
- B2 Allen
- B3 Leonard
- B4 Walker
- B5 Núñez

## **Undergrad Mentoring**

### **In Environmental Biology Student Posters**

- B6 Avery
- B7 Battles
- B8 Cirino
- B9 Davis
- B10 Lewis
- B11 Losada
- B12 Lyons
- B13 Martinez
- B14 Montano
- B15 Paisano
- B16 Rivera
- B17 Sastre
- B18 Sierra
- B19 Sims

## **CPS-17**

### **Large-Scale Phenomena**

- C1 Coles
- C2 Krauss
- C3 Landwehr
- C4 W. Lee
- C5 Tweedale

## **SPS-10**

### **Coastal Decision Making**

- C6 Ko
- C7 Harwell
- C8 Perron
- C9 DeLuca
- C12 Chamberlain
- C13 Hopkins
- C14 Young
- C15 L. Smith
- C16 Townsend
- C17 Neikirk

## **SPS-21**

### **Estuarine Health Indices**

- C18 Moy
- C19 Greenawalt
- C20 McLeod

## **SPS-24**

### **Coastal Lagoon Assessments**

- D1 Haag
- D2 Wazniak
- D3 Wicks
- D4 Humphries
- D5 Thomas
- D6 Pulich, Jr.

## **CPS-06**

### **Fish Ecology & Fisheries**

- D7 Griffiths
- D8 B. Smith
- D9 Roth
- D10 DuBeck
- D11 Kelso
- D12 O'Connell
- D13 Balogun
- D14 Shoji
- D15 Stevens
- D16 Lederhouse
- D17 Shervette
- D18 Aguirre
- D19 Goodwin
- D20 Lopez-Rasgado

## **SPS-04**

### **Identify & Assess Change**

- E1 Hale
- E2 Linville
- E3 Crusius
- E4 Krahforst
- E5 Lara-Dominguez
- E6 Morales
- E7 Milbrandt
- E8 Oliver
- E9 Ward
- E10 Govender
- E11 Peterson

## **SPS-14**

### **Temporal and Spatial Changes**

- E12 Scarton
- E13 Barreto
- E14 Baker
- E15 Marshall

## **SPS-23**

### **Geomorph. & Ecosys. State Change**

- E16 Kirwan
- E17 Zedler
- E18 May
- E19 Zaldivar-Jimenez
- E20 Anderson

### **Interactive Poster Session**

### **SYM-05** **Estuarine & Great Lakes Human Health Room: Providence (S2)**

- B13 Dickhoff
- B14 Chapman
- B15 White
- B16 Fong
- B17 G. Lovelace
- B18 Rick
- B19 S. Lovelace
- B20 Gunster

# Tuesday Poster Sessions At-A-Glance

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## SPS-28

### Tropical Seagrasses and Mangroves

- A1 Quarles
- A2 Devereux
- A3 Uhrin
- A4 Merello
- A5 Wolfe
- A6 Hall
- A7 Meads

## CPS-14

### Physical & Biological Interactions

- A8 Kuwae
- A9 Holm
- A10 Wozniak
- A11 Davis
- A12 Sloan
- A13 Hoffman
- A14 de Vries
- A15 Bossart
- A16 Howard-Strobel
- A17 Croft
- A18 Talke
- A19 Koepfler
- A20 Silverman

## SPS-20

### Ecosystem-Based Management

- B1 Yanez-Arancibia
- B2 McDonald
- B3 Corbett
- B4 Hedgepeth
- B5 Lane
- B6 Wilbur
- B7 Lipsky
- B8 Steward

## SPS-03

### Atmospheric Inputs

- B9 Dunn
- B10 Haag
- B11 Sopkin
- B12 Scudlark
- SYM-05**
- Estuarine & Great Lakes**
- Human Health**
- B13 Dickhoff
- B14 Chapman
- B15 White
- B16 Fong
- B17 G. Lovelace
- B18 Rick
- B19 S. Lovelace
- B20 Gunster

## SPS-34

### PAH Contaminated Sediments

- C1 Desbiens
- C2 Barthe

## SPS-02

### Restore & Protect Estuaries

- C3 Burrows
- C4 Teutli-Hernandez
- C5 Brumbaugh
- C6 Collins
- C7 Capone

## SPS-16

### Food Limitation

- C10 DeWitt
- C11 Veloza

## CPS-03

### Physiology & Behavior

- C12 Mozdzer
- C13 Kahn
- C14 Pregnall
- C15 Watson
- C16 Atkinson
- SYM-03**
- Nutrient Enrichment Effects**
- D1 Ford
- D2 Stutes
- D3 Cherry
- D4 Rego
- D5 Pesch
- D6 Aftanas
- D7 Ferdie
- D8 E. Miller
- D9 Keith
- D10 Henry
- D11 Dewsbury
- D12 Parker
- D13 DeYoe

## SPS-17

### Ecological Indicators

- D14 R. Johnson
- D15 Na
- D16 White
- D17 Brennan
- D18 Oravitz
- D19 Wolowicz
- D20 Metcalfe
- E1 Chainho
- E20 Green

## SPS-30

### Undergraduate Estuarine Science

- E2 M. Jones
- E3 Foreman
- E4 Sauls

## SPS-26

### Estuarine Hydrology

- E5 Kelly
- E6 Habib
- E7 Dusterhoff
- E8 Lane

## CPS-10

### Sediment Dynamics

- E9 Harris
- E10 S. Smith
- E11 Huijts
- E12 Wijekoon
- E13 Olivola
- E14 Wu
- E15 Sommerfield
- E16 Dickhudt
- E17 Woo
- E18 Tiling
- E19 Willis

### Interactive Poster Session

### SPS-28 Tropical Seagrasses and Mangroves Room: Poplar Hall (S1)

- A1 Quarles
- A2 Devereux
- A3 Uhrin
- A4 Merello
- A5 Wolfe
- A6 Hall
- A7 Meads

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<b>CPS-02</b>	<b>SPS-36</b>	<b>SPS-09</b>	<b>CPS-09</b>
<b>Population and Community Dynamics</b>	<b>Albemarle-Pamlico Processes</b>	<b>Science to Managers</b>	<b>Nutrients</b>
A1 Mohrman	B17 Walsh	D8 Brownlee	F1 Swaney
A2 Arreola	B18 Grand Pre	D9 Iannuzzi	F2 Coley
A3 Durand		D10 Thelen	F3 Crean
A4 Chen	<b>SPS-35</b>	D11 Tweed	F4 Filippino
A5 MacKenzie	<b>Extreme Sediment Biogeochemistry</b>	<b>SYM-02</b>	F5 Doering
A6 Devlin	B19 Sutula	<b>Coastal Invasive Species</b>	F6 Saindon
A7 Wood		D12 Casanova	F7 Picard
A8 Ketron	<b>SPS-25</b>	D13 Brown	F8 Losada
A9 Griffith	<b>Coral Diseases</b>	D14 Thomson, III	F9 Bettez
A10 Floyd	C1 Nieves	D15 Heinemann	<b>SYM-01</b>
A10B Casciano	<b>CPS-07</b>	D16 Boyd	<b>Observing Systems: HABs &amp; Hypoxia</b>
A11 Irlandi	<b>Habitat and Habitat Selection</b>	D17 Donnelly	F10 Hall
A12 Orlando	C2 Viehman	D18 Jönsson	F11 Hannafious
A13 Molina-Ramírez	C3 Decker	D19 Glardon	F12 Deamer
A14 Burrell	C4 Trebitz	D20 Boyer	F13 Thessen
A15 Wells	C5 Noble	<b>CPS-01</b>	F14 Berman
A16 Petersen	C6 Larsen	<b>Ecosystems and Trophic Dynamics</b>	<b>SPS-15</b>
A17 Graham	C7 Posey	E1 Ikenaga	<b>Factors Affecting Horseshoe Crabs</b>
A18 Boudreaux	C8 Slagle	E2 Dumbauld	F15 Grady
A19 Bulthuis	C9 Hengst	E3 Koo	F16 Itow
A20 Palefsky	C10 Waggy	E4 Stiner	F17 Burton
B1 Vayssières	C11 Woodrey	E5 Calfee	F18 Gerhart
B20 Marshalonis		E6 Betournay	F19 Tanacredi
<b>SPS-22</b>	<b>SPS-19</b>	E7 Raz-Guzman	F20 Hume
<b>Estuaries and Ecological Forecasting</b>	<b>Habitat Linkage Techniques</b>	E8 Marsh	
B2 Valette-Silver	C12 Smith	E9 Seliskar	
B3 Bacher	C13 Limburg	E10 Iwaniec	
<b>CPS-08</b>		E11 Armitage	
<b>Biogeochemistry</b>	<b>CPS-13</b>	E12 Croxton	
B4 Kana	<b>Climate Variability</b>	E13 Baggett	
B5 An/Soomro	C14 DuMond	E14 Lamberson	
B6 Pisani	C15 Fenger	E15 McIver	
B7 Waterson	C16 Kelly	E16 Sin	
B8 Kiss	C17 Anderson	E17 Rocha	
B9 O'Keefe	C18 Branco	E18 Morse	
B10 Izumi	C19 Poirier	E19 Bielecka	
B11 Bernhardt	C20 Bos	E20 Turnbull	
B12 Woodall			
B13 Henderson	<b>CPS-20</b>		
B14 Ruiz	<b>Scientist-Community Interactions</b>		
B15 Barrett	D1 Griffen	D5 Dantin	
B16 Michaels	D2 Serrano	D6 Fielder	
	D3 deFur	D7 Field	
	D4 Diefenderfer		

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**COL-03****Productivity & Diversity**

A1 Jung

**COL-12****HABs**

A14 Watson

**COL-19****Benthic-Pelagic Couplings**

A17 Nelson

**COL-07****Waterbirds**

A10 Perry

A11 Kidwell

**COL-13****New Understandings**

A15 Gercke

**COL-20****Urban Restoration**

A18 Gaeckle

A19 Phelps

A20 Carlson, Jr.

**COL-09****Managing the Bay**

A12 Landwehr

A13 Baldizar

**COL-15****Basin Modeling**

A16 Linker

**Interactive Poster Session****SPS-36****Albemarle-Pamlico Processes****Room: M4**

B17 Walsh

B18 Grand Pre

**Interactive Poster Session****SPS-25****Coral Diseases****Room: M5**

C1 Nieves

# Oral Sessions - Monday

MONDAY

## CPS-06: Fish Ecology and Fisheries

Chair(s): Carol McIvor, Julie Christian

Location: M5

- 8:00 AM **McIvor, C. C.**; Krebs, J. M.; Brame, A. B.: Assessing consequences of habitat alteration on wetlands-associated nekton in Tampa Bay, Florida
- 8:15 AM **Cohen, S. E.**; Bollens, S. M.: Growth and diet of non-native inland silversides and yellowfin gobies in restored and natural wetlands in the San Francisco Estuary, CA
- 8:30 AM **Stunz, G. W.**; Minello, T. J.; Rozas, L. P.: Oyster reef as essential habitat for finfishes and invertebrates
- 8:45 AM **Nanez-James, S. E.**; Stunz, G. W.; Holt, S. A.; Rooker, J. R.: Identification and characterization of nursery habitat for juvenile southern flounder, *Paralichthys lethostigma*, in Aransas Bay, Texas
- 9:00 AM **Becker, A.**; Laurenson, L. J.; Jones, P. L.: Fish use of the flooded margins of an intermittently open estuary in South Eastern Australia
- 9:15 AM **Lucy, J. A.**; Bain, C. M.: New insight to site fidelity, movement, and migration patterns of Virginia's marine recreational fisheries species using angler-assisted tagging data
- 9:30 AM Poster Summaries

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BREAK 9:45am – 10:15am

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- 10:15 AM **Morley, J. W.**; Buckel, J. A.; Lankford, T. E.: Energy dynamics of young-of-the-year bluefish (*Pomatomus saltatrix*) overwintering off North Carolina: the role of temperature and prey availability
- 10:30 AM **Elsdon, T. S.**; Gillanders, B. M.: Elements in calcified structures indicate migratory patterns of estuarine fish
- 10:45 AM **Allen, D. M.**; Dame , R. F; Young, R.: Nekton as material processors and transporters of nutrients within a marsh-estuarine ecosystem
- 11:00 AM **van Montfrans, J.**; Combs, D. M.; Latour, R. J.: Fish predation impacts on juvenile blue crabs in Chesapeake Bay seagrass beds
- 11:15 AM **Burton, W. H.**; Salcum, W.; Allen, S.; Wong, D.: Effects of sand mining on fish and mobile benthic communities at an ocean borrow pit created off the coast of Delaware

- 11:30 AM **Slacum, H. W.**; Burton, W. H.; Wong, D.; Weber, E.: Differences in relative abundance of marine guilds residing on offshore sand shoals and flat-bottom substrates in the Mid-Atlantic Bight

- 11:45 AM Poster Summaries

## CPS-11: Hydrodynamics of Estuaries

Chair(s): Jim O'Donnell, Arnoldo Valle-Levinson

Location: M6

- 8:00 AM **Salas-Monreal, D.**; Valle-Levinson, A.: Stratified flow dynamics over a hollow
- 8:15 AM **O'Donnell, J.**; Ackleson, S. G.: Length scales of the Connecticut River plume front
- 8:30 AM **Framiñan, M. B.**; Valle-Levinson, A.; Sepúlveda, H. A.; Brown, O. B.: Circulation, shear and flow convergence at a strong estuarine turbidity front
- 8:45 AM **Hao, Y.**; Wilson, R. E.: Lateral structure of tidal and residual currents in a wide estuary and effects on longitudinal salt dispersion
- 9:00 AM **Möller, O. O.**; Fernandes, E. H.; Castaing, P.; Lazure, P.: Tidal frequency dynamics of a southern Brazil coastal lagoon: choking and seiches
- 9:15 AM **Mied, R. P.**; Donato, T. F.: Modeling a lateral shear instability in the tidal Potomac River
- 9:30 AM Poster Summaries

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BREAK 9:45am – 10:15am

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- 10:15 AM **Whipple, A. C.**; Luettich, R. A.; Seim, H. E.: Measurements of Reynolds stress in a wind driven lagoonal estuary
- 10:30 AM **Mansfield, A. D.**; Hunt, C. D.; Mickelson, M. M.: Improving the accuracy of environmental studies relying on Rhodamine WT
- 10:45 AM **Simons, R. D.**; Monismith, S. G.; Winkler, G.; Johnson, L. E.; Saucier, F. J.: Modeling zooplankton retention in the estuarine transition zone of the St. Lawrence Estuary
- 11:00 AM **Chen, F.**; MacDonald, D. G.: Mixing processes and buoyancy flux rates in a thermal plume
- 11:15 AM **Angulo, N.**; Durazo, R.; Souza, A. J.: Hydrodynamics of San Quintin Bay, Baja California, Mexico.
- 11:30 AM **Han, Z. C.**; You, A. J.; Xu, Y. C.; Shi, Y. B.: Calculation method of ecological water demand for micro-tidal estuaries
- 11:45 AM **Narváez, D. A.**; Valle-Levinson, A.: Exchange hydrodynamics between a subestuary and a larger estuary

## SPS-01: Retention of Nutrients in Littoral Zone Systems with Different Physical Regimes

Chair(s):	Iris Anderson, Karen McGlathery, Wayne Gardner
Location:	M3
8:00 AM	<b>Huettel, M.</b> : Spatial and temporal patterns of sediment-water exchange processes in nearshore environments
8:30 AM	<b>Anderson, I. C.</b> ; Schaffner, L. C.; Stanhope, J. W.: Relationships between benthic ecosystem structure and function at high vs. low energy shallow sites
8:45 AM	<b>Lawson, S. E.</b> ; Wiberg, P.; McGlathery, K. J.: The importance of physically forced nutrient and chlorophyll fluxes in a shallow coastal lagoon
9:00 AM	<b>Nielsen, S. L.</b> : The influence of primary producers on estuarine nutrient cycling - interactions with hydrography
9:15 AM	<b>Patterson, D. A.</b> ; Lehrter, J. C.; Cebrian, J.; Stutes, J.; Stutes, A.; Hunter, A.; Corcoran, A.: Nitrogen loads and residence times as regulators of nitrogen accumulation in three coastal lagoons in the Northern Gulf of Mexico
9:30 AM	<b>Berg, P.</b> ; Roy, H.: Eddy correlation: an effective technique for measuring oxygen exchange between benthic communities and the water column
BREAK 9:45am - 10:15am	
10:15 AM	<b>Cornwell, J. C.</b> ; Owens, M. S.; Holyoke, R. R.: The influence of benthic microalgae on nutrient fluxes and denitrification in nutrient-enriched coastal ecosystems
10:30 AM	<b>Fossing, H.</b> ; Risgaard-Petersen, N.; Carstensen, J.: Benthic microalgae and their regulation of nitrogen and phosphate exchange across the sediment-water interface in four shallow water Danish estuaries
10:45 AM	<b>Giblin, A. E.</b> ; Tucker, J.: Patterns of denitrification in coastal sediments undergoing eutrophication: how macrophytes change the picture
11:00 AM	<b>Parker, F. M.</b> ; Anderson, I. C.: The role of benthic microalgae in carbon and nitrogen cycling in shallow water estuarine sediments
11:15 AM	<b>Gardner, W. S.</b> ; McCarthy, M. J.; Lu, Z.: Dissimilatory nitrate reduction to ammonium (DNRA), an important mechanism retaining bioavailable nitrogen in Florida Bay
11:30 AM	<b>Sundback, K.</b> : Retention of nutrients in non-tidal sediments - role of algae and denitrification

11:45 AM Poster Summaries

POSTER SESSION and LUNCH 12noon - 2pm

## SPS-01: Retention of Nutrients in Littoral Zone Systems with Different Physical Regimes

Chair(s):	Iris Anderson, Karen McGlathery, Wayne Gardner
Location:	M3
2:00 PM	<b>Burton Evans, J. L.</b> ; Cornwell, J. C.: Irradiance increases sediment oxygen penetration in benthic microalgal mats of Florida Bay, a shallow sub-tropical estuary
2:15 PM	<b>Stanaway, K. E.</b> ; Boyer, J. N.; Louda, J. W.; Mongkhonsri, P.: The effect of microbial mats on sediment nutrient fluxes in Florida Bay, USA
2:30 PM	<b>Zimmerman, R. C.</b> ; Burdige, D. J.: Oceanic and diagenetic controls of seagrass distributions on the Bahamas Banks
2:45 PM	<b>Nielsen, O. I.</b> ; Koch, M. S.; Jensen, H. S.: <i>Thalassia testudinum</i> phosphate uptake kinetics in Florida Bay at low in situ concentrations using a <sup>33</sup> P radioisotope technique
3:00 PM	<b>Holyoke, R. R.</b> ; Newell, R. I.; Owens, M. S.; Cornwell, J. C.: Soluble reactive phosphorus fluxes in shallow water sediments: interactions among benthic organisms and biogeochemical processes
3:15 PM	<b>Tyler, A. C.</b> ; Grosholz, E. D.; Mahl, U. H.: Linking community and ecosystem processes to macroalgal bloom dynamics and species invasions
3:30 PM	<b>Voss, C. M.</b> ; Bondavalli, C.; Tyler, A. C.; Anderson, I. C.; Christian, R. R.; McGlathery, K. J.; Viaroli, P.: Network analysis of primary producer dominance and its effects on nitrogen cycling in coastal lagoons
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Haese, R. R.</b> ; Murray, E.; Smith, C.; Smith, J.; Heggie, D.: The importance of the benthic-pelagic coupling for the N-cycling in a wave-dominated estuary (St. Georges Basin, SE Australia)
4:30 PM	<b>Chick, C. R.</b> ; Cornwell, J. C.: The role of tidal marshes on water quality in the Choptank River in the Chesapeake Bay estuary
4:45 PM	<b>McMillan, S. K.</b> ; Thompson, S. P.; Paerl, H. W.; Piehler, M. F.: Denitrification dynamics in headwater streams of coastal plain watersheds

5:00 PM	Torres, R.; <b>Hunsinger, G.</b> : Salt marsh ecogeomorphology and nutrient cycling
5:15 PM	<b>Poulin, P.</b> ; Pelletier, E.; KOUTITONSKY,V.: Seasonal exchange of dissolved nitrogen species between Northern salt marshes and estuarine environment
5:30 PM	<b>Dailey, S. K.</b> ; Boyer, J. N.: Shifting biogeochemical maximums in the Shark River, Florida Coastal Everglades
5:45 PM	<b>Dunton, K. H.</b> : Origin and fate of nitrogen loadings in two Texas estuarine systems

#### SPS-04: Identifying, Assessing, and Managing Human and Climatically-Induced Change of Estuarine Ecosystems

Chair(s):	Hans Paerl, Charles Hopkinson
Location:	York Hall (S4)
8:00 AM	<b>Cronin, T. M.</b> ; Willard, D. A.; Thunell, R.; Dwyer, G. S.; Swart, P. K.; Wingard, L.; Saenger, C.: Paleoceanographic evidence for abrupt climate impacts on east coast North American estuaries
8:30 AM	<b>Hilton, T. W.</b> ; Najjar, R. G.: Long-term trends in Chesapeake Bay salinity
8:45 AM	<b>Harding, Jr., L. W.</b> ; Adolf, J. E.; Miller, W. D.: Variability and trends of chlorophyll-a in Chesapeake Bay
9:00 AM	<b>Miller, W. D.</b> ; Harding, L. W.; Kimmel, D. G.: Predicting spring discharge of the Susquehanna River from a synoptic climatology for the eastern United States
9:15 AM	<b>Kimmel, D. G.</b> ; Miller, W. D.; Wood, R. J.; Harding Jr., L. W.; Roman, M. R.: Regional scale climate forcing of Chesapeake Bay trophic dynamics
9:30 AM	Poster Summaries

BREAK 9:45am - 10:15am

10:15 AM	<b>Redalje, D. G.</b> ; Rowe, E. A.; Natter, M. J.; Sawant, P. A.; Pluhar, R. J.; Schilling, R. L.; Kirk, E. A.; Neu, A. M.; Mojzis, A. K.: Has the environmental quality of the Bay of St. Louis, Mississippi changed over the past 25 years?
10:30 AM	<b>Testa, J. M.</b> ; Kemp, W. M.: Interacting effects of climate and nutrient management on water quality, net ecosystem production, and biogeochemical fluxes in the Patuxent River estuary

#### Request from the Session Conveners

As a courtesy to all, please plan to place your cell phone on buzzer or turn it off when you enter the oral session rooms.

10:45 AM	<b>Arhonditsis, G. B.</b> ; Paerl, H. W.; Valdes-Weaver, L. M.; Stow, C. A.; Reckhow, K. H.: Exploring the Neuse River Estuary phytoplankton community dynamics: delineation of the spatial and temporal patterns of nitrogen and phosphorus limitation
11:00 AM	<b>Valdes-Weaver, L. M.</b> ; Piehler, M. F.; Pinckney, J. L.; Howe, K. E.; Rossignol, K.; Paerl, H. W.: Hydrologically driven controls of phytoplankton biomass and community structure in the Neuse River Estuary-Pamlico Sound continuum
11:15 AM	<b>Adolf, J. E.</b> ; Harding, L. W.; Miller, W. D.: Variability of phytoplankton floral composition and size structure in Chesapeake Bay
11:30 AM	<b>Peierls, B. L.</b> ; Paerl, H. W.: Using microbial communities to assess hurricane impact on an estuary
11:45 AM	Poster Summaries

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM	<b>Howarth, R. W.</b> ; Swaney, D.; Boyer, W. W.; Marino, R.; Jaworski, N.; Goodale, C.: The effect of climate change and climate variation on long-term delivery of nitrogen to estuaries
2:30 PM	<b>Burger, N. H.</b> : Ecosystem responses to internal and external loading in six Chesapeake Bay tributaries
2:45 PM	<b>Piehler, M. F.</b> ; Gallo, T.; McMillan, S. W.; Thompson, S. P.; Ensign, S. H.; Paerl, H. W.: Impacts of nutrient loading from an agricultural and silvicultural watershed on coastal water quality
3:00 PM	<b>Childers, D. L.</b> ; Boyer, J. N.; Davis, S. E.; Madden, C. J.; Rudnick, D. T.; Sklar, F. H.: Relating precipitation and water management to nutrient concentrations in the oligotrophic "upside-down" estuaries of the Florida Everglades
3:15 PM	<b>Morris, J. T.</b> : Geomorphological indicators of coastal wetland condition
3:30 PM	<b>Hampel, H.</b> ; Cattrijssse, A.: Anthropogenic factors and their possible influences on the habitat value of the tidal marshes for nekton in Belgium-The Netherlands

BREAK 3:45pm - 4:15pm

4:15 PM	<b>Day, J. W.</b> : Implications of climate change and energy costs for the restoration of the Mississippi delta
4:30 PM	<b>Muth, D. J.</b> ; Saunders, C. J.; Anderson, W.; Childers, D. L.; Newman, S.: Photosynthetic and stomatal conductance variation in <i>Cladium jamaicense</i> across hydrologic gradients in the South Florida Everglades

4:45 PM	<b>Thom, R. M.</b> ; Borde, A. B.; Southard, J. A.; Sargeant, S. L.; Williams, G. D.; O'Rourke, L. K.; Hibler, L. F.: Climate-related factors of temperature, sea level, and circulation affect eelgrass in the Pacific Northwest	9:30 AM	<b>Banas, N. S.</b> ; Hickey, B. M.; Ruesink, J.; Newton, J. A.: Tidal stirring, bivalve grazing, and patterns of primary and secondary productivity in Willapa Bay, Washington
5:00 PM	<b>Zieman, J. C.</b> : Florida Bay and the Everglades Restoration: what was it really like?		BREAK 9:45am - 10:15am
5:15 PM	<b>Demopoulos, A. W.</b> ; Kauffman, J. B.; Tetteh, M.; Cormier, N.; Ewel, K. C.: Catastrophic disturbance as regulators of wetland community structure and function: typhoon impacts on mangroves	10:15 AM	<b>Powell, E. N.</b> ; Klinck, J. M.; Ashton-Alcox, K. A.: Long-term trends in oyster abundance, recruitment and mortality in Delaware Bay: the influence of climate regime shifts
5:30 PM	<b>Tomasko, D. A.</b> ; Anastasiou, C.; Kovach, C.; Stevens, P.: Dissolved oxygen dynamics in Charlotte Harbor and its contributing watershed, in response to Hurricanes Charley, Frances and Jeanne	10:30 AM	<b>Bushek, D.</b> ; Ford, S. E.; Porter, D. E.: A comparison of dermo disease in oysters at two different latitudes
5:45 PM	<b>Fries, J. S.</b> ; Noble, R. T.; Paerl, H. W.; Characklis, G. W.: Turbidity and particle suspensions in the Neuse River Estuary: identifying contributions of resuspension, runoff and phytoplankton	10:45 AM	<b>Soniat, T. M.</b> ; Powell , E. N.; Klinck, J. M.; Hofmann, E. E.: Climatic cycles influence Perkinsus marinus infection of eastern oysters, <i>Crassostrea virginica</i>
		11:00 AM	<b>WetHEY, D. S.</b> ; Gilman, S.; Helmuth, B. S.: Predicting biogeographic responses to climate change in intertidal ecosystems: a mechanistic approach
		11:15 AM	Struski, C.; <b>Bacher, C.</b> : Use of a 2D model to assess the effect of cultivated oysters on primary production

## SPS-06: Observational and Modeling Studies of Shellfish Responses to Climate Variability

Chair(s):	Eileen Hofmann, Eric Powell
Location:	M2
8:00 AM	<b>Weiss, M. B.</b> ; Curran, P. B.; Gobler, C. G.: Impacts of ocean exchange on phytoplankton community composition, water quality, and growth of juvenile hard clams ( <i>Mercenaria mercenaria</i> ) in a lagoon estuary
8:15 AM	<b>Zarnoch, C. B.</b> ; Schreibman, M. P.: Studies on the over-winter mortality of juvenile aquacultured hard clams, <i>Mercenaria mercenaria</i>
8:30 AM	<b>Kraeuter, J. N.</b> ; Grizzle, R. E.; Hofmann, E. E.; Klinck, J. N.; Powell, E. N.; Bricej, V. M.; Buckner, S. C.: Hard clams ( <i>Mercenaria mercenaria</i> ) and climate – results from a physiologically based modeling study
8:45 AM	<b>Hofmann, E. E.</b> ; Klinck, J. M.; Powell, E. N.; Kraeuter, J. N.; Marzec, R. J.; Bricej, V. M.: Can hard clam larval survivorship explain recruitment failure in Great South Bay: a modeling study
9:00 AM	<b>Christman, M. C.</b> ; Volstad, J. H.; Lewis, D.: Modeling population dynamics of <i>Crassostrea virginica</i> in Chesapeake Bay
9:15 AM	<b>North, E. W.</b> ; Hood, R. R.; Gross, T. F.; Zhong, L.; Li, M.; Manuel, J. L.; Newell, R. I.; Kennedy, V. S.: Towards predicting oyster recruitment in Chesapeake Bay: the influence of environmental variability and larval behavior on transport and settlement

## SPS-08: Truth and Consequences in Interdisciplinary Studies

Chair(s):	Lauriston King
Location:	Poplar Hall (S1)
8:00 AM	<b>King, L. R.</b> : The elusive nature of interdisciplinary studies
8:15 AM	<b>Palmer-Moloney, L. J.</b> : Meeting the expectation of critical analysis: problem-based authentic learning for multidisciplinary resource management
8:30 AM	<b>Ferrier, M. D.</b> ; Albaugh, R. L.; Kolmerten, C. A.: An experiential model for undergraduate student learning in coastal environmental science: a multidisciplinary approach
8:45 AM	<b>Reiter, M. A.</b> : Designing interdisciplinary environmental programs: integrating the disciplinary with the interdisciplinary
9:00 AM	<b>Clough, L. M.</b> ; Johnson, J.; Ambrose, W. G.; Griffith, D.; Whiting, A.; Reynolds, M.; T., . E.; Jewett, S.: Simultaneous application of traditional and scientific ecological knowledge to ecological change in the nearshore Kotzebue Sound ecosystem
9:15 AM	<b>Weinstein, M. P.</b> : Can we achieve sustainability in the coastal zone?

## SPS-10: Developing Science-Based Information for Coastal Decision Making

Chair(s): Kevin Summers

Location: M4

8:00 AM **Burgan, B. G.**: Coastal science for decision-makers

8:15 AM **Kiddon, J.**; Walker, H.; Benyi, S.; Buffum, H.; Charpentier, M.; Cobb, D.; Copeland, J.; Hale, S.; Pesch, G.; Strobel, C.: An interactive electronic report of coastal condition in the Northeast 2000/2001

8:30 AM **McRae, G.**: The index period sampling approach and implications for estuarine fish community metrics

8:45 AM Jutte, P. C.; **Van Dolah, R. F.**; Riekerk, G.; Chestnut, D. E.: Use of National Coastal Assessment data in evaluating and regulating the condition of South Carolina's estuarine habitat

9:00 AM **Macaulay, J.**; Summers, J. K.: Sharing coastal monitoring technologies with US territories and commonwealths in EPA's National Coastal Assessment

9:15 AM **Ranasinghe, J. A.**; Welch, K. I.; Slattery, P. N.; Montagne, D. E.; Huff, D. D.; Lee, H.; Hyland, J. L.; Thompson, B.; Weisberg, S. B.; Oakden, J. M.: The biogeography of soft-bottom benthic invertebrates of bays and estuaries of the west coast of the contiguous USA

9:30 AM **O'Connor, T. P.**; Lauenstein, G. G.: NOAA Mussel Watch results as a regional assessment of status and trends

**BREAK 9:45am – 10:15am**

10:15 AM **Harvey, J. E.**; Harwell, L.; Heitmuller, P.; Van Dolah, R.; Flournoy, P.; Overton, J.: National Coastal Assessment: creating useful information for managing southeast coastal resources

10:30 AM **Hyland, J. L.**; Nelson, W. G.; Summers, J. K.: Assessing ecological condition in near-coastal waters along the U.S. western and southeastern continental shelf

10:45 AM **Kopp, B.**; Neckles, H. A.; Cole, L.; Milstead, B.; Granger, S.: Monitoring estuarine condition within North Atlantic U.S. national parks

11:00 AM Slater, G. L.; **Fuller, R. N.**; Hood, W. G.: Shorebird monitoring to inform a multi-estuary approach to habitat conservation

11:15 AM Sharp, L.; Barrilleaux, T.; **Weifenbach, D. K.**: Coastwide Reference Monitoring System-*Wetlands* (CRMS) update

11:30 AM **Heatwole, D. W.**; Fuller, R. N.; Wilhelm, J. O.; Ennis, T.: Acting locally, thinking ecoregionally: a comparative, multi-estuary approach to monitoring and restoration

11:45 AM Poster Summaries

**POSTER SESSION and LUNCH 12noon – 2pm**

2:00 PM **Short, F. T.**; Coles, R. G.; Koch, E. W.; Fortes, M.; McKenzie, L.; Gaekle, J. L.: SeagrassNet: a global seagrass monitoring update

2:15 PM **Fitzpatrick, J. J.**; Isleib, R. R.; Guha, B.: Point source nutrients and coastal eutrophication: an initial assessment

2:30 PM Li, C. S.; Salas, W. A.; **Boles, S. H.**; Dalton, R.: Developing a watershed nutrient management tool (WNM-DNDC) for reducing nutrient loading in coastal watersheds

2:45 PM **Hunt, C. D.**; Rust, S. W.; Buxton, B. E.: Application of statistical modeling for optimization of a coastal water quality monitoring program

3:00 PM **Arnold, G. L.**; Wang, T.; Shen, J.; Luckenbach, M. W.; Wang, H. V.: Predicting changes in coastal water quality associated with the conversion of agricultural land to residential and commercial developments

3:15 PM **Hanson, J. M.**: Coastal trawl surveys: what have we been missing?

3:30 PM **Scarborough, R. W.**; Wilson, B. D.; Carter, D. B.; Madsen, J. A.: Benthic and sub-bottom mapping of the Delaware Bay for improved coastal management

**BREAK 3:45pm – 4:15pm**

4:15 PM **Hastie, B. F.**: Rapid assessment of biodiversity in estuarine benthic communities: objective surrogate selection

4:30 PM **Perez, B. C.**: The functioning of the Atchafalaya Delta complex (Louisiana) and its use as a natural analog for coastal restoration strategies

4:45 PM **Vandenburgh, E. M.**: Towards sustainable management of the hard clam fishery: the effectiveness of rotating Marine Protected Areas in maintaining spawning stock biomass

5:00 PM **Pelletier, M. C.**; Ho, K. T.; Burgess, R. M.; Campbell, D. E.; Perez, K.; Cantwell, M. G.; Rocha, K.; Perron, M. M.; Cardin, J.; Johnson, R. L.: A new method for diagnosing causes of impairment in estuaries: the Pollutant Identification Evaluation (PIE) approach

5:15 PM **Green, M. O.**: Assessing risk of “sedimentation damage” in estuaries associated with land development: a tool for resource managers

- 5:30 PM **Farris, C. N.**; Fredette, T. J.: A regional assessment of contaminant trends in the disposal of dredged material from southern New England
- 5:45 PM **Fell, P. E.**; Warren, R. S.: Responses of brackish tidal marsh vegetation and macroinvertebrate communities to *Phragmites australis* control measures

### **SPS-12: Historic and Current Use and Management of Estuarine Environments by Indigenous, Multi-Generational Colonizers and Pre-Industrial People in Western Atlantic Nations**

- Chair(s): Sandy Wyllie-Echeverria, Elizabeth Smith
- Location: M5
- 4:15 PM **Wolf, J. C.**; Enderlein, T.: Utilizing geospatial and visualization technology to explore the Chesapeake Estuary of 1608
- 4:30 PM **Bromberg, K. D.**; Bertness, M. D.: Reconstructing New England salt marsh losses using historical maps
- 4:45 PM **Begossi, A.**: Extraction of natural resources by inhabitants of the Atlantic forest coast: a resilient process?
- 5:00 PM **Martinez, D.**: Indian conservation of marine resources in the Pacific Northwest of Northwest America
- 5:15 PM **Aswani, S.**: Integrating indigenous ecological knowledge and sea tenure with natural and social science research for designing marine protected areas in estuarine areas
- 5:30 PM **Kimbrough, K. L.**: A conceptual model approach to utilizing traditional knowledge in resource management

### **SPS-14: Temporal and Spatial Changes Within and Among Coastal Ecosystems**

- Chair(s): Dan Baird, Joe Luczkovich
- Location: Stratford (S3)
- 8:00 AM **Ulanowicz, R. E.**: Identifying temporal and spatial bottlenecks in estuarine ecosystem dynamics
- 8:30 AM **Scharler, U. M.**; Ulanowicz, R. E.: Interpreting network analysis results of a mangrove ecosystem, using three different flow currencies (carbon, nitrogen, phosphorus)
- 8:45 AM **Asmus, H.**; Asmus, R. M.; Baird, D.: Spatial and temporal patterns of energy flow in the Sylt-Rømø Bight: a network analysis approach
- 9:00 AM **de Jonge, V. N.**; Brauer, V. S.: Ecological network analysis and phytoplankton, challenge or bottleneck

- 9:15 AM **Baird, D.**; Vosloo, M. C.: The impact of recreational and subsistence fishing on estuarine ecosystem function: a network analysis approach
- 9:30 AM **Johnson, G. A.**; Baird, D. B.; Christian, R. R.; Peterson, C. H.: Consequences of hypoxia on estuarine ecosystem function: energy diversion from consumers to microbes

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BREAK 9:45am - 10:15am

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- 10:15 AM **Heymans, J. J.**; Guénette, S.; Christensen, V.; Trites, A.: Indications of change in the Gulf of Alaska due to regime shifts and fishing as derived from network analysis
- 10:30 AM **Luczkovich, J. J.**; Johnson, J. C.; Borgatti, S. P.: Visualization of the seasonal trophic network dynamics of the Chesapeake Bay
- 10:45 AM **Johnson, J. C.**; Luczkovich, J. J.; Borgatti, S. P.: A Continuous-Time Markov Chain Model (SIENA) of the seasonal trophic network dynamics of the Chesapeake Bay
- 11:00 AM **Livingston, R. J.**: Long-term spatial and temporal changes in a series of Gulf coastal systems
- 11:15 AM **Harris, L. A.**; Nixon, S. W.: The virtual eelgrass meadow: a simulation of *Zostera marina* growth, biomass allocation, and landscape dynamics
- 11:30 AM **Madley, K. A.**: Trend analysis of boat propeller scarring in seagrass habitats within the Charlotte Harbor National Estuary Program
- 11:45 AM Poster Summaries

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POSTER SESSION and LUNCH 12noon - 2pm

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- 2:00 PM **Murrell, M. C.**; Hagy, J. D.; Campbell, J. G.; Caffrey, J. M.: Effect of light on benthic and water column oxygen fluxes in a subtropical estuary
- 2:15 PM **Wynne, T. T.**; Stumpf, R. P.; Ransibrahmanakul, V.: Bottom albedo and turbidity patterns in Florida Bay
- 2:30 PM **Ji, R.**; Valiela, I.; Beardsley, R.: Coastal ecosystem response to warming: a simple model of plankton dynamics in Waquoit Bay
- 2:45 PM **Hyde, K. J.**; O'Reilly, J. E.; Oviatt, C. A.: A comparison of SeaWiFS chlorophyll and *in situ* chlorophyll a measurements in Massachusetts Bay (1998–2003)
- 3:00 PM **Craft, Christopher, B.**: Freshwater input affects vertical accretion and nutrient accumulation of tidal marshes, Sapelo Island, Georgia (USA)
- 3:15 PM **Maiaro, J. L.**; Baltz, D. M.; Walker, N. D.: Landscape changes in Louisiana marshes: consequences for coastal fisheries and habitats

3:30 PM	<b>Kraatz, L. M.</b> ; Halls, J. N.; Leonard, L. A.: An assessment of back-barrier salt marshes in southeastern North Carolina using geographical information systems
<b>SPS-18: Estuarine Fish Behavior: What Can the Fish Themselves Tell Us About Essential Fish Habitat?</b>	
Chair(s):	Charles "Si" Simenstad, Carl Young, Denise Breitburg
Location:	M5
2:00 PM	<b>Rountree, R. A.</b> : Listening to fish – an often overlooked method to determine essential fish habitat
2:15 PM	<b>Rand, P. S.</b> ; Taylor, J. C.; Jenkins, J.; Yoder, C. C.: Activity behavior of juvenile anchovies in an episodically stratified estuary: implications for individual energetics and trophic dynamics
2:30 PM	<b>Freund, E. V.</b> ; Fuller, M.; Ammann, A. J.; MacFarlane, R. B.: Juvenile salmonid use of small central California estuaries
2:45 PM	<b>van de Wetering, S. J.</b> ; French, R.: Juvenile salmonid use of large complex estuarine wood habitats in an Oregon estuary
3:00 PM	<b>Young, C. D.</b> ; Simenstad, C. A.; Parrish, J. K.; Cordell, J. R.: Variation in juvenile chum salmon ( <i>Oncorhynchus keta</i> ) behavior migrating through intertidal landscapes
3:15 PM	<b>Goetz, F.</b> ; Greene, C.; Fresh, K.; Brakensiek, K.; Jeanes, E.; Connor, E.: Using hydrophone arrays and stand-alone receivers to examine movements and survival of Puget Sound salmonids
3:30 PM	<b>Fabrizio, M. C.</b> ; Manderson, J. P.; Pessutti, J. P.: Habitat use and residency time of black sea bass in a disturbed coastal environment: inferences from an ultrasonic tagging experiment

**SPS-21: Indices to Evaluate Estuarine Health**

Chair(s):	Jim Wilson
Location:	M2
2:00 PM	<b>Wilson, J. G.</b> : Indices to evaluate estuarine health
2:30 PM	<b>Dauer, D. M.</b> ; Llansó, R. J.; Diaz, R. J.; Schaffner, L. C.: Twenty years (1985–2004) of benthic monitoring of Chesapeake Bay, USA: accomplishments, advances and future directions
2:45 PM	<b>McLusky, D. S.</b> : The recovery of the Forth Estuary from petrochemical pollution – a case history

3:00 PM	<b>Nelson, W.</b> ; Burgan, B.; Summers, K.: Assessment of coastal condition at regional and national scales: indicators and reporting approaches of the U.S. EPA National Coastal Assessment
3:15 PM	<b>Elliott, M.</b> : The adequacy of indicators for separating anthropogenic and natural change in estuaries
3:30 PM	<b>Bartoli, M.</b> ; Nizzoli, D.; Vezzulli, L.; Viaroli, P.: Measurements of benthic fluxes during induced oxic–anoxic transitions: a tool for assessing the sediment vulnerability status?
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Buchanan, C.</b> ; Johnson, J.: A framework for combining scored indicators into indexes of ecosystem integrity
4:30 PM	<b>Schaffner, L. C.</b> ; Anderson, I. C.; Stanhope, J. W.; Parker, F.; Gillett, D.; Metcalfe, W.: Relationships between the benthic index of biotic integrity (B-IBI), ecosystem function and food web structure in shallow water habitats of Chesapeake Bay
4:45 PM	<b>Lacouture, R. V.</b> ; Johnson, J. M.; Buchanan, C.; Marshall, H. G.: The continuing saga of the development of a phytoplankton index of biotic integrity for Chesapeake Bay
5:00 PM	Poster Summaries
5:15 PM	Discussion

**SPS-23: Geomorphic Features and Ecosystem State Change: Examples from Mangroves and Salt Marshes**

Chair(s):	Mark Brinson, Robert Twilley
Location:	M1
4:15 PM	<b>Twilley, R. R.</b> : Comparing hydrogeomorphic models of mangrove (Ciénaga Grande, Colombia) and salt marsh (Barataria Basin, USA) restoration projects
4:30 PM	<b>Spicer, J. S.</b> ; Turner, R. E.: Canals v. creeks: channel modification and the distribution of <i>Spartina alterniflora</i> and <i>Geukensia demissa</i> in a Louisiana tidal salt marsh
4:45 PM	<b>Reed, D. J.</b> ; BREACH team: Biogeomorphic thresholds in tidal marsh development along an estuarine gradient: the CALFED BREACH study
5:00 PM	<b>LeMay, L. E.</b> ; Friedrichs, C. T.; Hopkinson, C. S.: Assessing the role of mosquito ditches on sedimentation and geomorphic evolution in New England salt marshes, Rowley River, MA

- 5:15 PM Torres, R.; **Styles, R.**: Effects of salt marsh topography on tidal creek currents
- 5:30 PM **Oertel, G. F.**; Allen, T. R.; Mcleod, G.: Spatial analysis of basin hypsography for determining repletion in coastal lagoons, Hog Island Bay, Virginia
- 5:45 PM **Brinson, M. M.**; Blum, L.; Christian, R. R.; Ricker, L.; Appalone, E.; May, M.: Observations on sea-level induced transitions of ecosystem states from terrestrial forest to estuary
- 6:00 PM **Currin, C. A.**; Fonseca, M. S.: Factors controlling sediment accretion rates from natural and stabilized shorelines in North Carolina

### **SPS-24: Ecological Assessment of Water Quality, Living Resources and Habitats of Coastal Lagoons**

Chair(s): Roman Jesien, William Dennison

Location: M1

- 8:00 AM **Jesien, R. V.**; Dennison, W.: Drivers for ecological assessment in coastal lagoon watersheds
- 8:30 AM **Kennish, M. J.**; Haag, S. M.; Sakowicz, G. P.: Environmental assessment of the Barnegat Bay-Little Egg Harbor Estuary
- 8:45 AM **Herrera-Silveira, J. A.**; Ramirez-Ramirez, J.; Merino, V. F.; Osorio, M. I.; Trejo, P. J.; Zaldivar-Jimenez, A.: Water quality, phytoplankton and submerged aquatic vegetation of the coastal lagoons from the north of Yucatan (SE Mexico)
- 9:00 AM **Christian, D. J.**; Sucsy, P.; Sun, D.; Belaineh, G.; Cera, T.; Carter, E.: Development and use of an integrated hydrodynamic, sediment transport, and water quality modeling system for Indian River Lagoon, FL
- 9:15 AM **Hall, L. M.**; Virnstein, R. W.; Beck, J.: Defining seagrass density at the edge of mapped seagrass beds in Indian River Lagoon, FL: ground-truthing versus photointerpretation
- 9:30 AM **Mutchler, T.**; Kopecky, A.; Dunton, K. H.: Identifying the symptoms of stress in seagrass systems

BREAK 9:45am - 10:15am

- 10:15 AM **Camacho-Ibar, V. F.**; Rodriguez-Cardozo, L.; Aveytua-Alcazar, L.; Ortiz-Campos, E.; Hernandez-Ayon, J. M.; Santamaría-del-Angel, E.: Nitrogen dynamics in an upwelling influenced coastal lagoon from the arid Baja California peninsula, NW Mexico
- 10:30 AM **Cole, L. W.**; Nixon, S. W.: Nitrogen loading to Chincoteague Bay, MD, VA: a reassessment

- 10:45 AM **Gao, Y.**: Deposition of atmospheric nutrients and acidic substances and its potential impact on coastal habitats
- 11:00 AM **Sturgis, R. B.**: Evaluation of water quality relative to episodic events within Chincoteague Bay
- 11:15 AM **Boyer, J. N.**; Dailey, S. K.: Bioavailability of DON from Everglades marsh, mangroves and Florida Bay
- 11:30 AM **Hernandez-Ayon, J. M.**; Camacho-Ibar, V. F.; Dickson, A. G.; Mejia-Trejo, A.; Galindo-Bect, M. S.: Changes of total CO<sub>2</sub> in seawater during intense upwelling events in San Quintín Bay, México
- 11:45 AM **Aveytua-Alcazar, L.**; Camacho-Ibar, V. F.; Souza, A. J.: On the nitrate-temperature relationship in a hypersaline, upwelling-influenced coastal lagoon in Baja California, Mexico

### POSTER SESSION and LUNCH 12noon - 2pm

- 2:00 PM Poster Summaries
- 2:15 PM **Orth, R. J.**; Marion, S. R.; Moore, K. A.; Wilcox, D. J.; Anderson, B. A.: Seagrass recovery in the Delmarva Coastal lagoons: the roles of natural recovery and restoration
- 2:30 PM **Wilcox, D. J.**; Orth, R. J.; Marion, S. R.: Monitoring large-scale seagrass restoration success with low-level aerial photography and multispectral digital photography
- 2:45 PM **Marion, S. R.**; Orth, R. J.: Vegetated habitat use by epifauna in recovering seagrass and macroalgal systems: documenting ecosystem shifts following large-scale eelgrass restoration
- 3:00 PM **Durako, M. J.**; Kahn, A. E.; Koch, M.: Effect of temperature and pore-water glucose enrichment on quantum yield, leaf absorptance and electron transport rates of *Thalassia testudinum*
- 3:15 PM **Lasi, M. A.**; Steward, J. S.; Trefry, J. H.; Morris, L. J.; Virnstein, R. W.; Tweedale, W. A.; J, E. J.: Seagrasses and “particles in suspense” – unravelling a mystery and setting restoration targets for Mosquito Lagoon, FL
- 3:30 PM **Murphy, R. F.**; Secor, D. H.: Fish assemblages in Maryland’s coastal lagoon complex: identifying spatially discrete communities

### **Request from the Session Conveners**

As a courtesy to all, please plan to place your cell phone on buzzer or turn it off when you enter the oral session rooms.

## SPS-32: Utility of Residence Time and Related Concepts in Estuarine Studies

Chair(s):	Edward Dettmann, Merryl Alber, Joan Sheldon
Location:	M6
2:00 PM	<b>Aikman, F.</b> ; Lanerolle, L.: Numerical approaches to calculating residence times: results of the “NOS Workshop on Residence/Flushing Times in Bays and Estuaries”
2:30 PM	<b>MacCready, P.</b> : An energetic argument: does river flow or tidal mixing control the estuarine exchange flow?
2:45 PM	<b>Geyer, W. R.</b> ; Warner, J. C.: The influence of spring-neap tidal modulation of the estuarine circulation on residence time
3:00 PM	<b>Chadwick, B.</b> ; Zirino, A.; Garzon, A.: Sensitivity of residence time and exchange characteristics of Venice Lagoon to simulated variations in physical forcing
3:15 PM	<b>Lipphardt Jr., B. L.</b> ; Small, D.; Kirwan Jr., A. D.; Wiggins, S.; Ide, K.; Grosch, C. E.; Paduan, J. D.: Synoptic Lagrangian maps: application to surface transport in Monterey Bay
3:30 PM	<b>Small, D. M.</b> ; Lanerolle, L. W.; Wiggins , S.: The use of Synoptic Lagrangian Maps for estimating residence times and its comparisons to other techniques
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Prandle, D.</b> : Determining and using ‘age’, ‘residence’ and ‘flushing’ times for dissolved, suspended and surficial sediments – vertically, axially and estuarine-wide
4:30 PM	<b>Dettmann, E. H.</b> : The central role of flushing time in determining response of estuaries to nutrient loading
4:45 PM	<b>Sheldon, J. E.</b> ; Alber, M.: Beyond whole-estuary flushing times: using transport times through salinity zones to explain chlorophyll patterns in the Altamaha River estuary (Georgia, USA).
5:00 PM	<b>Flannery, M. S.</b> ; Chen, X. J.: A segmented approach for incorporating residence time values in the assessment of physical-chemical factors affecting chlorophyll <i>a</i> in tidal rivers
5:15 PM	<b>Bricker, S. B.</b> ; Ferreira, J. G.; Wolff, W. J.; Simas, T. C.: Residence time influences on phytoplankton diversity and eutrophication response in estuaries and coastal waterbodies
5:30 PM	Poster Summaries
5:45 PM	Discussion

## SYM-04: Observing the Coastal and Ocean Environment: Developments in Sensor Technology and the Use of Long-Term Data Sets for Operational Ecology

Chair(s):	Geno Olmi, Ken Tenore, Bruce Michael, Tom Malone
Location:	Poplar Hall (S1)
10:15 AM	Hemsley, M.; <b>Malone, T.</b> : Overview of the coastal component of the Integrated Ocean Observing System (IOOS)
10:45 AM	<b>Mazzilli, S. A.</b> ; Christian, R. R.; de Mora, S. J.: The Global Terrestrial Observing System: defining the coast and sentinel systems for coastal observations
11:00 AM	<b>Sullivan, J.</b> : Utilizing long-term data sets to determine the context and connectivity of Gray’s Reef National Marine Sanctuary along the Latitude 3130 transect
11:15 AM	<b>Devol, A. H.</b> ; Ruef, W.; Emerson, S.; Newton, J.: High frequency observations of chemical and biological variables in Puget Sound, WA
11:30 AM	<b>Caffrey, J. M.</b> : Combining long-term and high frequency water quality data to understand ecological processes in estuaries
11:45 AM	Poster Summaries

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM	<b>Martin, R. D.</b> ; Guinasso, N. L.; Bender, L. C.; Lee, L. L.; Beegle-Krause, C. J.; Simecek-Beatty, D.: The role of long-term data sets in oil spill trajectory analysis for emergency response: examples using ten years of Texas Automated Buoy System data
2:15 PM	O'Donnell, J.; <b>Bohlen, W. F.</b> ; Dam, H. G.; Howard-Strobel, M. M.; Cohen , D.; McCargill, G.; Gay, P.: LISICOS and hypoxia in Long Island Sound
2:30 PM	<b>Tenore, K. R.</b> : Providing information on sensor/sensor platform technologies for observing systems: the Alliance for Coastal Technologies (ACT)
2:45 PM	<b>Tamburri, M. N.</b> : ACT technology evaluations: providing information on instrument performance and capabilities
3:00 PM	<b>Luther, M. E.</b> ; Heil, C.: Sensor needs for regional coastal ocean observing systems
3:15 PM	<b>Michael, B. D.</b> ; Trice, T. M.; Heyer, C. J.; Stankelis, R. M.; Preston, S. D.: Integrating innovative technologies to assess shallow water habitats in Chesapeake Bay

3:30 PM	<b>Quintrell, J. S.</b> : From promise to actuality: technology for use in coastal monitoring	9:15 AM	<b>Fulton, M. H.</b> : Development of an emerging marine contaminants research program at the NOAA Center of Excellence in Oceans and Human Health at the Hollings Marine Laboratory
BREAK 3:45pm - 4:15pm			9:30 AM
4:15 PM	<b>Trueblood, D. D.</b> ; Langan, R.: Sensor technology development for better coastal management		<b>Scholz, N. L.</b> ; Incardona, J. P.; Collier, T. K.: Fish as models for biomedical research in toxicology
4:30 PM	<b>Mooney, R. J.</b> ; Arnerich, T.: Optical dissolved oxygen sensors—what's all the buzz about?		
4:45 PM	<b>Chekalyuk, A. M.</b> : New technological developments for advanced laser biomonitoring in coastal and estuarine aquatic areas		
5:00 PM	<b>Mitchell, T. O.</b> : Luminescent dissolved oxygen measurement		
5:15 PM	<b>Kelly, V. M.</b> ; Codispoti, L. A.; Glibert, P. M.; Alexander, J.; Trice, T. M.; Heyer, C.: Integrating technologies to improve spatial and temporal resolution of biochemical fields in coastal ecosystems		
5:30 PM	<b>Klemas, V. V.</b> ; Field, R.; Weatherbee, O.: NOAA/NERRS Remote Sensing Applications Assessment Project		
5:45 PM	<b>Field, D. W.</b> ; Malhotra, A.; Shull, S.: NOAA/NERRS Remote Sensing Applications Assessment Project: evaluating new remote sensing technology for mapping benthic habitats in the Padilla Bay NERR		

## SYM-05: Connecting Estuarine and Great Lakes Health and Human Health

Chair(s): Paul Sandifer, Nathalie Valette-Silver, Carolyn Sotka, J. Trtanj, F. Holland, T. Rowles

Location: Providence (S2)

*Interactive posters may be viewed in Providence during the oral presentations of this session*

8:00 AM	<b>Sandifer, P.A.</b> ; <b>Trtanj, J.</b> ; Magnien, R. E.: Programmatic and scientific scope of NOAA's new Oceans and Human Health Initiative
8:15 AM	<b>Garrett, E. S.</b> ; Lowery, T. A.: Seafood safety: the necessity to resolve the mercury in fish dilemma
8:30 AM	<b>O'Neill, S. M.</b> ; West, J. E.; Ylitalo, G.: Habitat, life history, and diet considerations in contaminant burdens in fish species
8:45 AM	<b>Ylitalo, G. M.</b> ; O'Neill, S. M.; Brown, D. W.; West, J.; Bolton, J.; Krahn, M. M.: Pacific Northwest resident killer whales and chemical contaminants in prey species
9:00 AM	<b>Kucklick, J. R.</b> ; Keller, J. M.; Stapleton, H. M.; Yordy, J. E.; Peck, A. M.; Swarthout, R. W.; Kannan, K.; Pugh, R. S.; Becker, P. R.: Temporal and spatial trends of "compounds of emerging concern" in marine mammals and sea turtles

3:00 PM	<b>Kirkpatrick, B.</b> ; Fleming, L. E.; Backer, L. B.; Bean, J. A.; Cheng, Y. S.; Reich, A.; Zaias, J.; Pierce, R.; Naar, J.; Baden, D.: An epidemiologic study to examine the effects of the aerosolized Florida red tide toxins on people with asthma	4:30 PM	<b>Loge, F. J.</b> ; Arkoosh, M. A.; Ginn, T. R.; Johnson, L. L.; Collier, T. K.: Impact of environmental stressors on the dynamics of disease transmission
3:15 PM	<b>Gulland, F. M.</b> ; DeLong, R.; Brodie, E.; Van Dolah, F.; Leighfield, T.; Lowenstine, L. J.; Melin, S.; Barakos, J.: Domoic acid intoxication: California sea lions as sentinels of human health and models of disease	4:45 PM	<b>Straub, P. F.</b> ; Higham, M. L.; Phoel, W. C.: Genomic biomarkers of environmental degradation in migratory estuarine fishes: models for human health risks
3:30 PM	<b>Schwacke, L. H.</b> ; Hall, A. J.; Rowles, T. K.: Bottlenose dolphins as a sentinel species of coastal ecosystems	5:00 PM	<b>DiDonato, G. T.</b> ; Sanger, D. M.; Holland, A. F.: Tidal creek ecosystems: sentinel habitats for assessing the effects of watershed development on ecosystem and human health
<hr/>		5:15 PM	<b>Varanasi, U.</b> ; Dickhoff, W. W.; Senauer, A. M.: Making critical connections on the West Coast: pathogens, toxins and people
4:15 PM	<b>Dobson, A. P.</b> ; Gulland, F. M.; DeLong, R. L.; Ylitalo, G. M.; Melin, S.; Greig, D.; J. E. N.; Lowenstine, L. J.: Urogenital cancer in California sea lions: a model of interactions among anthropogenic contaminants, gamma herpes virus infection and genetics	5:30 PM	<b>Brandt, S. B.</b> : Ecosystem forecasting: integrating science to reduce the risks to human health
		5:45 PM	<b>Holland, A. F.</b> ; Sandifer, P. A.: The NOAA Center of Excellence for Oceans and Human Health at the Hollings Marine Laboratory

## Mid-Day Poster Session - Monday

Poster presenters should be available to answer questions during the lunch hours.

Lunch will be provided in the poster hall.

The letter and number represents the poster position within the hall;  
see page 110 for a map of the poster hall positions.

Each poster will be available for viewing for one full day: 9:00 AM – 6:00 PM.

**12:00 PM – 2:00 PM · Hampton Roads Ballroom (Marriott)**

### Retention of Nutrients in Littoral Zone Systems with Different Physical Regimes

- A1. **Bala Krishna Prasad, M.**; Ramanathan, A. L.: Variability in the dynamics of major cations (Mg, Ca and K) in the Indian tropical estuarine mangrove forest waters – its driving forces
- A2. **Marino, R.**; Berg, P.; Foreman, K.; Giblin, A.; Howarth, R. W.; McGlathery, K. J.; Tucker, J.; Hayn, M.: Coupled biogeochemical and ecological feedbacks during progressive N enrichment and eutrophication of shallow coastal ecosystems: a case study
- A3. **Ren, L.**; Rabalais, N. N.; Turner, R. E.; Dortch, Q.; Morrison, W. L.; Mendenhall, W.: Nutrient limitation in upper Barataria Basin, Louisiana: microcosm bioassays
- A4. **Hardison, A. K.**; Anderson, I. C.; Canuel, E. A.: Seasonal effects of an ephemeral macroalgal bloom on water quality and sediment characteristics in a shallow coastal lagoon
- A5. **Stanhope, J. W.**; Anderson, I. C.; Hardison, A. K.; McGlathery, K. J.: Is the dominant source of nitrogen to a temperate coastal lagoon of allochthonous or autochthonous origin?
- A6. **Right, M. A.**; Childers, D. L.: Looking upstream: canal inputs of water and nutrients to oligotrophic marshes in the Florida Coastal Everglades
- A7. Poulin, P.; Lemarchand, K.; **Pelletier, E.**; Brindle, J. R.: Hypoxia development in St. Lawrence Estuary (Qc, Canada): a possible pelagic contribution
- A8. **Holzer, K. K.**; McGlathery , K. J.: Macroalgal mediation of nitrogen cycling processes in a shallow temperate lagoon

### Utility of Residence Time and Related Concepts in Estuarine Studies

- A9. **Fugate, D. C.**; Friedrichs, C. T.; Bilgili, A.: Estimation of residence time in a shallow back barrier lagoon, Hog Island Bay
- A10. **Babson, A. L.**; Kawase, M.: Sill effects on fjord residence times
- A11. **Burla, M.**; Baptista, A. M.: Variability of residence times in the Columbia River estuary and plume: characterization and ecological implications

### Hydrodynamics of Estuaries

- A12. **Wilson, M.**; Luther, M.; Meyers, S.; Holm, H.; Linville, A.; Gilbert, S.; Subramanian, V.: Effects of extreme events on residual circulation and residence time for Tampa Bay, Florida
- A13. Vitta, A. P.; **Möller, O. O.**; Marques, W. C.; Hirata, F. E.; Silveira, A. M.: Hydrodynamical processes of the entrance channel area of Patos Lagoon
- A14. **Piñones, A.**; Valle-Levinson, A.: Tidal currents variability at the entrance to a coastal plain estuary
- A15. **Becker, M. L.**; Luettich, R. A.; Mallin, M. A.: Hydrodynamic behavior of the Cape Fear River Estuary: an observational synthesis
- A16. **Lee, Y. J.**; Lwiza, K. M.: The role of horizontal exchange on interannual variability of temperature and salinity in estuaries
- A17. **Carlson, D. F.**: Wind-driven coastal upwelling on the North-Atlantic coast of Florida from June – August 2003
- A18. **Riveron-Enzastiga, M. L.**; Valle-Levinson, A.: Fortnightly variability at the transition between two subestuaries

- A19. **Montgomery, R. T.**; Woithe, R. D.; Maki, K. L.; McConnell, R. G.; Robison, D. E.: Determining the effect of freshwater withdrawals on Florida Gulf Coast tidal rivers using continuous salinity records
- A20. **Leung, K. D.**: Bathymetric and hydrodynamic changes in the Hampton Harbor estuary, New Hampshire

### **Observing the Coastal and Ocean Environment: Developments in Sensor Technology and the Use of Long-Term Data Sets for Operational Ecology**

- B1. **Moore, K. A.**; Anderson, B. A.; Reay, W. R.; Orth, R. J.; Neikirk, B. B.; Wilcox, D. J.; Kenne, A. K.; Hoffman, F. A.: Measuring attainment of water clarity standards for estuaries using a CFD approach: can existing SAV beds serve as useful reference areas?
- B2. **Allen, T. R.**; Tolvanen, H.; Oertel, G. F.; McLeod, G.: Spatial analysis and ecological applications of tidal flushing and wave exposure in Chincoteague Bay, Virginia, USA
- B3. **Leonard, L. A.**; Durako, M. J.; Moss, M. K.; Mallin, M. A.; Cahoon, L. B.; Posey, M. H.; Alphin, T. D.; Lankford, T. E.: Long term monitoring of ecological and physical conditions in the coastal ocean
- B4. **Walker, S.**; Porter, D.; Klemas, V.; Field, D.; Jensen, J.; Field, R.; Malhotra, A.: NOAA/NERRS Remote Sensing Applications Assessment Project (RESAAP): an overview of a remote sensing evaluation initiative
- B5. **Núñez, J. M.**: A new and versatile multipurpose water sampler, with no springs attached

### **Undergraduate Mentoring in Environmental Biology**

- B6. **Avery, S. K.**; Gardiner, O.; Pride, C.; Curran, C.: Relative abundance of diatoms and dinoflagellates found in Country Club Creek, Savannah, GA
- B7. **Battles, E. V.**; Murray, L.; Kemp, W. M.: Artificially induction of tuber production in two species (*P. perfoliatus* and *S. pectinata*) of submersed aquatic vegetation.
- B8. **Cirino, Y.**: Influences of climatic change on Great Lakes ecosystem: a review of possible impacts of long-term changes
- B9. **Davis, S. L.**: The abundance of macrofauna, mean height and density of *Spartina alterniflora* at Country Club Creek, Savannah, GA

- B10. **Lewis, C. M.**: Behavioral responses of *Oxyrrhis marina* to thin layers of varying prey concentrations
- B11. **Losada, G. D.**; Childers, D. L.: Determining sources of phosphorous spikes in a Florida Everglades estuary
- B12. **Lyons, G. C.**: Speciation of phosphorus in marine systems
- B13. **Martinez, E.**: Settlement behavior as a function of light intensity: tests with three solitary Ascidian larvae
- B14. **Montano, M. R.**: Development and growth of *Cancer magister* larvae: a comparison of Puget Sound and outer coast populations
- B15. **Paisano, L. N.**: Comparative sensitivity of Pacific herring, sea urchin and top smelt bioassays to creosote
- B16. **Rivera, A.**; Porter, G.; Pattnaik, R.; Matsunga, T.; Valencia, R.; Yost, R.: Remediation of dairy effluent using a multi-soil-layered system
- B17. **Sastre, M. P.**; Santiago, M. S.; **Rodríguez, J.**; Olivier, K.: Population dynamics of *Pyrodinium bahamense* and *Ceratium furca* at Laguna Grande, Fajardo, Puerto Rico
- B18. **Sierra, R.**; Burke, R.: Dietary habits of diamondback terrapins of Jamaica Bay, New York
- B19. **Sims, L. D.**: Comparison of growth between attached and free living bacteria

### **Patterns, Response and Management Implications to Large-Scale Phenomena**

- C1. **Coles, R. G.**; McKenzie, L.; De'ath, G.; Roelofs, A.; Lee Long, W.: Patterns of seagrass distribution in the Great Barrier Reef Marine Park - modelling spatial variation in water too deep for traditional mapping techniques
- C2. **Krauss, K. W.**; Doyle, T. W.; Twilley, R. R.; Rivera-Monroy, V. H.; Sullivan, J. K.: Subsidy-stress in estuarine floodplains: hydroperiod as a growth constraint in mangroves?
- C3. **Landwehr, J. M.**: Determining the "best" model for explaining water clarity variation during SAV seasons within the tidal tributary rivers of the Chesapeake Bay watershed
- C4. **Lee, W.**; Singhurst, L.; Buzan, D.; Chen, G.: Changes of salinity, habitat and species distribution in relation to man-made structures and practices in the Galveston Bay system, Texas
- C5. **Tweedale, W. A.**; Lasi, M. A.; Steward, J. S.: Effects of the 2004 hurricanes on selected water quality parameters in the Central Indian River Lagoon, Florida

## Developing Science-Based Information for Coastal Decision Making

- C6. **Ko, J. Y.**; Day, J. W.; Templet, P. H.: Reducing perception gaps among stakeholders in operating a Mississippi diversion for ecosystem restoration by applying systematic information processing
- C7. **Harwell, L. C.**; Engle, V. D.; Harvey, J. E.: The art of coastal monitoring: a focus on versatility
- C8. **Perron, M. M.**; Pelletier, M. C.; Ho, K. T.; Burgess, R. M.; Perez, K.; Cantwell, M. G.; Rocha, K.; Cardin, J.; Johnson, R. L.; Davey, E.: An approach for diagnosing impairments in estuaries: preliminary results of the Narragansett Bay case study
- C9. DeLuca, N.; **Sapp, A.**; Rabalais, N. N.; Babin, B.: Gulf of Mexico hypoxia web site unveiled
- C12. **Chamberlain, R. H.**; Doering, P. H.; Sabol, B. M.: Quantifying submerged aquatic vegetation fluctuation using hydroacoustic technology in the Caloosahatchee Estuary, Florida
- C13. **Hopkins, K. J.**; Brandt, S. L.; Claggett, P. R.; Fitch, A.; Linker, L. C.; Shenk, G. W.: Development and distribution of extensive local and regional environmental modeling input databases for the Chesapeake Bay Program Community Watershed Model
- C14. **Young, D. R.**; Clinton, P. J.; Specht, D. T.; DeWitt, T. H.; Ozretich, R. J.; Kentula, M. E.; Stevens, A. W.: The distribution of eelgrass (*Zostera marina* L.) and benthic green macroalgae with bathymetry in a Pacific Northwest Estuary
- C15. Smith, L. M.; **Craven, W. G.**; Summers, J. K.: Probabilistic survey design for assessing the ecological condition of near shore resources
- C16. **Townsend, A.**; Howarth, R. W.; Boesch, D. F.; Scavia, D.; Swaney, D. P.: The North American Nitrogen Center (NANC)
- C17. **Neikirk, B. B.**; Moore, K. A.; Reay, W. R.; Anderson, B. A.; Wilcox, D.; Kenne, A. K.; Austin, J.; Hoffman, F. A.: Phytoplankton monitoring along an estuarine gradient using continuous underway and fixed station *in vivo* fluorescence monitoring

## Indices to Evaluate Estuarine Health

- C18. **Moy, C. Y.**; Jutte, P. C.: Development and evaluation of an estuarine biotic integrity index for South Carolina tidal creeks
- C19. **Greenawalt, J. M.**; Hale, J. A.; Fuhr, K.; Ott, J.: Using seagrass species composition and distribution as an estuarine indicator in multi-species seagrass habitats to address management needs

- C20. **McLeod, L. A.**; Hunt, C. D.; Hall, J. N.; Libby, P. S.: Estuarine and coastal indicator development – a systematic process

## Ecological Assessment of Water Quality, Living Resources and Habitats of Coastal Lagoons

- D1. **Haag, S. M.**; kennish, M. J.; Lathrop, R. G.; Sakowicz, G. P.: Seagrass monitoring in the Barnegat Bay-Little Egg Harbor Estuarine System
- D2. Wazniak, C.; **Hall, M.**; Carruthers, T.; Jesien, R.; Dennison, W.: Determining the aquatic health of the Maryland coastal bays
- D3. **Wicks, E. C.**; Koch, E. W.; Severn, W. A.: Linking adjacent habitats via sea-level rise: is marsh retreat affecting seagrass distribution?
- D4. **Humphries, E. M.**; Savidge, K.: An approach to monitoring microcystin toxins from cyanobacteria using commercially available test kits
- D5. **Thomas, J. E.**; Jones, A. B.; Trice, T. M.; Carruthers, T. J.; Pantus, F.; Saxby, T. A.: Utilizing spatially intensive data in monitoring Maryland's Coastal Bays
- D6. **Pulich, Jr., W. M.**; Mutchler, T.; Hardegree, B.; Dunton, K.; Wyllie-Echeverria, S.: Development of a landscape-based approach for predicting disturbances of seagrass beds

## Fish Ecology and Fisheries

- D7. **Griffiths, R. J.**; Herzka, S. Z.; McCarthy, I.: Distribution, abundance and movement patterns of juvenile flatfishes in the Punta Banda Estuary, Baja California, Mexico
- D8. **Smith, B.**; Weaver, K.; Berlinsky, D.: The effects of passage impediments and environmental conditions on out-migrating juvenile American shad
- D9. **Roth, A. F.**; Satterwhite, M. C.; Maiaro, J. L.; Baltz, D. M.: Community structure and gradients of anthropogenic stress: developing an estuarine index of biotic integrity in Barataria Bay, Louisiana
- D10. **DuBeck, G. D.**; Curran, M. C.: Fluctuations in the abundance of flatfishes in Country Club Creek, Georgia
- D11. **Kelso, D. P.**; Jones, R. C.: Interannual patterns in fish communities in the Gunston Cove area of the tidal freshwater Potomac River
- D12. **O'Connell, A. U.**; O'Connell, M. T.; Hastings, R. W.: Assessing regional differences in estuarine fish assemblages using meta-analysis: a comparison of trawl data from four separate surveys in southeastern Louisiana

- D13. **Balogun, B. A.**; Waguespack, Y.Y.; Draxler, A. F.; Wieczorek, D.: Progress in the effects of exposure to contaminated marine sediments on the health and survival of winter flounder
- D14. **Shoji, J.**; Tanaka, M.: Factors affecting survival of larval and juvenile Japanese temperate bass around the estuarine turbidity maximum of the upper Ariake Bay, Japan
- D15. **Stevens, M.**; Maes, J.; Ollevier, F.: Trophic partitioning amongst an intertidal fish assemblage
- D16. **Lederhouse, T. M.**; Paynter, K. T.: Harvest efficiency in managed oyster reserves
- D17. **Shervette, V. R.**; Ruehl, C. B.; Gelwick, F.; DeWitt, T.: Preliminary analysis of habitat-associated growth and morphology in juvenile pinfish
- D18. Aguirre, W. E.; **Shervette, V. R.**; Cevallos, R.; Gonzales, M.; Pozo, F.: Occurrence of a recently described pufferfish in a mangrove estuary of Ecuador
- D19. **Goodwin, J. D.**; Paynter, K. T.; Chen, M. E.: Field trials of triploid *Crassostrea ariakensis* and *Crassostrea virginica* at three sites in Maryland and one in Virginia
- D20. **Lopez-Rasgado, F. J.**; Herzka, S. Z.: Evaluation of estuarine nursery habitat for juvenile California halibut based on growth and density measurements
- E5. **Lara-Dominguez, A. L.**; Yanez-Arancibia, A. L.; Day, J. W.; Reyes, E.: Environmental characterization of La Mancha Lagoon, Gulf of Mexico: an assessment to establish its conservation state and recover its natural dynamics
- E6. Morales, O. S.; **Herrera-Silveira, J. A.**: Water quality response to hurricane event in coastal areas of Yucatan, Mexico
- E7. Milbrandt, E. C.; **Greenawalt, J. M.**; Sokoloff, P. D.; Bortone, S. A.: Immediate and long-term impacts from a category 4 hurricane on mangrove forests: implications of altered hydrology and coastal development
- E8. **Oliver, L. M.**; Barron, M. G.: Effects of temperature and ultraviolet radiation on the experimental bleaching of *Pocillopora damicornis*
- E9. **Ward, G. A.**; Smith III, T. J.; Whelan, K. R.; Walker, C.: Large-scale processes in mangrove ecosystems: forest scaling relationships and recruitment patterns following catastrophic disturbance, Florida
- E10. **Govender, Y.**: Spatial model for habitat of an exploited land crab, *Cardisoma guanhumi*, in Jobos Bay Estuary, Puerto Rico
- E11. Peterson, V. M.; **Corliss, B. H.**; Corbett, D. R.; Dwyer, G. S.: Mg/Ca and  $\delta^{18}\text{O}$  time series of benthic foraminifera in Pamlico Sound, NC: development of environmental proxies

### **Identifying, Assessing, and Managing Human and Climatically-Induced Change of Estuarine Ecosystems**

- E1. **Hale, S. S.**: An index of benthic condition for the coastal Gulf of Maine supports environmental assessments
- E2. **Linville, A. J.**; Luther, M. E.; Meyers, S. D.; Holm, H.; Wilson, M.; Sopkin, K.; Gilbert, S. A.; Subramanian, V.: Bathymetric alterations due to urbanization and its effects on flow field and tidal residual circulation for Tampa Bay, Florida
- E3. **Crusius, J.**; Brattton, J. F.; Koopmans, D.; Spruill, T.; Corbett, D. R.: Submarine groundwater discharge to the Neuse River Estuary (NC) determined from continuous radon measurements
- E4. **Krahforst, C. F.**; Smith, J.; Wallace, G. T.: The comparative biogeochemistry of silver and other metals in three Massachusetts estuaries

### **Temporal and Spatial Changes Within and Among Coastal Ecosystems**

- E12. **Scarton, F.**; Are, D.; Rismundo, A.; Day, J. W.: Accretion and elevation changes at salt marshes and reedbeds of the Lagoon Of Venice (Italy): 10 years of data
- E13. **Barreto, M. B.**: Spatial and temporal changes in species composition and structure in a degraded mangrove forest
- E14. **Baker, G.**; van Proosdij, D.: Historical changes in intertidal geomorphology in the Southern Bight of the Minas Basin, Bay of Fundy
- E15. **Marshall, H. G.**; Lane, M. F.: Phytoplankton biomass and water quality trends within Chesapeake Bay, USA

**Geomorphic Features and Ecosystem State Change:  
Examples from Mangroves and Salt Marshes**

- E16. **Kirwan, M. L.**; Murray, A. B.: Response of tidal marsh morphology to vegetation disturbance: implications for metastability
- E17. Zedler, J. B.; **Callaway, J. C.**; Madon, S. P.; Wallace, K. J.; Larkin, D. J.; O'Brien, E. L.: The effect of tidal creeks on salt marsh functioning
- E18. **May, C. L.**; Lionberger, M. A.; Garrity, N. J.; Williams, P. B.; Schoellhamer, D. H.: Landscape-scale geomorphic effects of wetland restoration, South San Francisco Bay salt pond restoration

E19.

**Zaldivar-Jimenez, M. A.**; Herrera-Silveira, J. A.; Coronado-Molina, C. A.: Vertical accretion, elevation change and litterfall production along environmental gradient in Celestun Lagoon, a karstic fringe mangrove forest (SE, Mexico)

E20.

**Anderson, G. H.**; Tiling, G.; Smith III, T. J.: Mangrove peat hydrodynamics and morphology along the Harney River, Southwest Florida.

# Oral Sessions - Tuesday

## CPS-03: Environmental Physiology and Behavior

Chair(s):	Mike Durako, Marshall Pregnall
Location:	M2
8:00 AM	<b>Biber, P. D.</b> : Seagrass responses to press vs. pulse light-limitation events
8:15 AM	<b>Belshe, E. F.</b> ; Durako, M. J.: Evaluating pulse-amplitude modulated fluorometry for landscape scale assessment of photosynthetic characteristics
8:30 AM	<b>Wijte, A.</b> ; Bedinger, L. A.; Peck, G. L.; Chen, Y. C.: Maximum storage of belowground reserves in rhizomatous invasive plant species coincides with low leaf nitrogen content
8:45 AM	<b>DeLorenzo, M. E.</b> ; Serrano, L.; Wendt, R.; Skinner, J.: Effects of pesticides on harmful algal species of the class Raphidophyceae
9:00 AM	<b>Joyner, J. J.</b> ; Paerl, H. W.; O'Neil, J. M.; Bronk, D. A.: Nutrient effects on growth rates and metabolism of benthic cyanobacteria <i>Lyngbya</i> spp. from Florida
9:15 AM	<b>Islam, M. S.</b> ; Uehara, T.; Sarker, M. M.: Embryonic development of the estuarine crab <i>Perisesarma bidens</i> (Crustacea: Brachyura: Sesarmidae) from the mangroves of the Okinawa Island, Japan
9:30 AM	Poster Summaries

## CPS-10: Estuarine Sediment Dynamics and Morphodynamics

Chair(s):	Larry Sanford, Carl Friedrichs
Location:	M6
8:00 AM	<b>Souza, A. J.</b> ; Krivtsov, V.; Jones, S. E.: Observations of turbulence and suspended sediment in the Dee Estuary
8:15 AM	<b>Traynum, S.</b> ; Styles, R.: Sediment exchange near a tidal node
8:30 AM	<b>Saal, L. B.</b> ; Gamble, D. W.; Leonard, L. A.: An assessment of TSS concentrations in a southeastern North Carolina tidal creek before and after intense rain events
8:45 AM	<b>Kim, Y. H.</b> ; Voulgaris, G.: Tidal variability of <i>in situ</i> size of suspended flocs in an estuarine environment
9:00 AM	<b>Chu, Z. X.</b> ; Zhai, S. K.: Preliminary analysis of response of sediment features in Yangtze River into sea to water storage in Three Gorges Project reservoir
9:15 AM	<b>Sanford, L. P.</b> ; Blumberg, A.: Modeling resuspension and deposition with a dynamically varying mixed sediment bed
9:30 AM	Poster Summaries

BREAK 9:45am – 10:15am

10:15 AM	<b>Fleming, H. M.</b> ; Fenster, M. S.; FitzGerald, D. M.: Potomac River estuary: bedload sediment source or sink?
10:30 AM	<b>Snedden, G. A.</b> ; Cable, J. E.; Swarzenski, C. M.; Swenson, E. M.: Aspects of sediment loading into a Louisiana deltaic estuary through a Mississippi River diversion
10:45 AM	<b>Nitsche, F. O.</b> ; Bell, R. E.; Carbotte, S. M.; Ryan, W. B.; Slagle, A.; Flood, R.: Detailed analysis of sediment distribution and morphology in the Hudson River Estuary
11:00 AM	<b>Shen, h. t.</b> ; Wu, h. l.; Wu, j. x.: Sediment budget over 100-year time scale in the Changjiang (Yangtze) Estuary
11:15 AM	<b>Dellapenna, T. M.</b> ; Bronikowski, J. L.; Manuel, J.: Hurricanes as agents of change: Hurricane Claudette (2003) and the history of other hurricane impacts on Lavaca Bay, Texas
11:30 AM	<b>Foyle, A. M.</b> ; Norton, K. P.; Mattson, J. P.: Presque Isle Bay, Lake Erie: a century of sediment dispersal in an urban freshwater bay
11:45 AM	Poster Summaries

## CPS-14: Physical and Biological Interactions

Chair(s):	Lynette Cardoch, Dan Childers
Location:	M5
8:00 AM	<b>Smith, S. M.</b> ; Portnoy, J. W.; Gwilliam, E. L.: Responses of emergent and submerged macrophyte vegetation to tidal restoration of an impounded lagoon in Cape Cod National Seashore (Massachusetts, USA)
8:15 AM	<b>Roelke, D. L.</b> ; Davis, S. E.; Gable, G. M.; Li, H. P.; Miller, C. J.: Biological response during a >300-day period of high-inflow in San Antonio Bay, TX: fixed station data
8:30 AM	<b>Francisco, V.</b> ; Herzka, S. Z.: Physical and biological factors influencing the plastic feeding behavior of the sand dollar ( <i>Dendraster excentricus</i> ) in a dynamic estuarine environment
8:45 AM	<b>Saunders, C. J.</b> ; Childers, D. L.; Lynch, J. A.; Jaffe, R.; Gao, M.: Modeling the dynamics of <i>Cladium jamaicense</i> biomass over the last century in Everglades National Park
9:00 AM	<b>Virnstein, R. W.</b> : Why there is no seagrass in Georgia or South Carolina (Is there?)
9:15 AM	<b>Troxler-Gann, T.</b> ; Childers, D. L.: Coupling oligotrophy and peat development in a coastal freshwater swamp of Panamá

9:30 AM Poster Summaries

BREAK 9:45am - 10:15am

- 10:15 AM **Kibler, S. R.**; Varnam, S. M.; Vandersea, M. W.; Litaker, R. W.; Tester, P. A.; Faust, M. A.: Water column structure and phytoplankton distribution in a mangrove embayment, Twin Cays, Belize
- 10:30 AM **Hoeppner, S. S.**; Rose, K. A.; Reyes, E.; Day, J. W.: Modeling swamp succession in coastal Louisiana: the effect of multiple stressors on tree growth and survival
- 10:45 AM **Temmerman, S.**; Bouma, T. J.; Herman, P. M.; Wang, Z. B.; De Vries, M. B.: Bio-physical interactions and spatial self-organisation in tidal marsh landscapes
- 11:00 AM **Bergstrom, P. W.**; Judy, C.: Interactions among dark false mussels, water clarity, and Submerged Aquatic Vegetation (SAV) abundance in mesohaline regions of Chesapeake Bay in 2004
- 11:15 AM **Dorgan, K. M.**; Jumars, P. A.: Mechanical constraints on marine burrowers
- 11:30 AM **Morzaria-Luna, H.**; Zedler, J. B.: *Triglochin concinna* alters N supply to other salt marsh species
- 11:45 AM Poster Summaries

### **SPS-02: Restoring and Protecting the World's Estuaries – Comparing Exemplary Programs**

Chair(s): Rich Batiuk, Ted Graham

Location: M1

- 10:15 AM **Chang-Hee/Lee, C. H.**: Environment management strategy for Han River Estuary in Korea
- 10:30 AM **Glamore, W. C.**: Restoring tidal wetlands in Australia: developing multi-stage methods for acid sulphate soil terrains
- 10:45 AM **Williams, G. D.**; Thom, R. M.; Evans, N. R.; McEwen, S.: Developing a strategic, science-based, restoration prioritization process for the Columbia River Estuary
- 11:00 AM **Mallin, M. A.**; McIver, M. R.; Wells, H. A.; Parsons , D. C.; Johnson, V. L.: Water quality improvements following sewage treatment upgrades in the New River Estuary, North Carolina
- 11:15 AM **Eckenrod, R. M.**; Greening, H.; Janicki, A. J.: Sustaining success in seagrass recovery in Tampa Bay through research and adaptation
- 11:30 AM **Traber, M. S.**; Granger, . S.; Nixon, . S.: Seed-based mariculture: an innovative and sustainable approach to large-scale eelgrass restoration in Narragansett Bay, RI

- 11:45 AM **Deis, D. R.**; Buckingham, C. A.: Evaluation of the southern estuaries for the Comprehensive Everglades Restoration Plan

### **SPS-03: Atmospheric Inputs of Nutrients and Contaminants to Estuaries**

Chair(s): William Ullman, Joseph Scudlark

Location: M2

- 4:15 PM **Paerl, H. W.**; Whitall, D. R.; Peierls, B. L.; Dennis, R. L.: Ecological implications of atmospheric nitrogen deposition in estuarine and coastal waters
- 4:45 PM **Poor, N.**; Atkeson, T.; Greening, H.: Atmospheric deposition of nitrogen to Tampa Bay
- 5:00 PM **Kieber, R. J.**; Skrabal, S. A.; Willey, J. D.; Bradshaw, L.: Nitrogen inputs into the Cape Fear River Estuary: a system-wide approach
- 5:15 PM **Ullman, W. J.**; Scudlark, J. R.; Volk, J. A.; Savidge, K. B.: Is atmospheric deposition a significant source of phosphorus to coastal-plain estuaries?
- 5:30 PM **Avery, G. B.**; Kieber, R. J.; Willey, J. D.; Shank, G. C.; Whitehead, R. F.: The impact of hurricanes on the flux of rainwater and Cape Fear River water dissolved organic carbon to Long Bay, Southeastern United States
- 5:45 PM **Dickhut, R. M.**; Countway, R. E.; Arzayus, K. M.; Canuel, E. A.: Fate of atmospherically deposited polycyclic aromatic hydrocarbons (PAHs) in Chesapeake Bay

### **SPS-05: Developing Useful Modeling and Mapping Tools to Help Managers Address Sea Level Rise**

Chair(s): Carol Auer

Location: M4

- 2:00 PM **Torres, R.**: Structure of a salt marsh landscape
- 2:15 PM **van Proosdij, D.**: Crossing the divide: challenges and opportunities for coastal zone mapping in the Bay of Fundy
- 2:30 PM **Sklar, F. H.**: The design of Everglades landscape models for evaluating the impacts of SLR
- 2:45 PM **Doyle, T. W.**; Melder, M.; Krauss, K. W.: SELVA-MANGRO: a multi-scale landscape model to predict mangrove forest response to sea-level rise and hydrologic restoration of the Everglades
- 3:00 PM **Kolker, A. S.**; Goodbred, S. L.; Mushacke, F. M.; Cochran, J. K.; Aller, R. C.: Sea level rise or eutrophication? An analysis of salt marsh loss in diverse physical settings
- 3:15 PM **Johnson, Z. P.**: Sea level rise response planning in the state of Maryland

3:30 PM	<b>Strange, E. M.</b> ; Jones, R. W.: Planning for sea level rise
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Feyen, J. C.</b> ; Hess, K.; Spargo, E. A.; White, S. A.; Sellars, J. D.; Gill, S. K.: Assessment of the impacts of sea level rise with a combined hydrodynamic and digital elevation model
4:30 PM	<b>Street, M. W.</b> : Management of North Carolina's coastal fish habitats and fisheries as sea level rises
4:45 PM	<b>Kenworthy, W. J.</b> ; Fonseca, M. S.; Field, D.; Malhotra, A.: The potential impact of sea level rise and global warming on seagrasses in North Carolina
5:00 PM	<b>Rybczyk, J. M.</b> ; Gwozdz, R.; Maxwell, S.; Kairis, P.: Linking field and modeling studies to predict the effects of global climate change and hydrologic alterations on a National Estuarine Research Reserve
5:15 PM	<b>Luscher, A. E.</b> : Utilizing internet mapping applications to improve Maryland's shoreline management capabilities
5:30 PM	<b>Nuttle, W. K.</b> : Stochastic approach to describing the effect of sea level on coastal ecosystems
5:45 PM	<b>Rasser, M. K.</b> ; Forbes, M. G.; Dunton, K. H.: Using geospatial analysis to explore the potential effects of sea level rise on halophytes in a microtidal salt marsh

### SPS-11: Research Challenges Resulting from EMAP/NCA National Surveys

Chair(s):	Kevin Summers
Location:	M2
10:15 AM	<b>McDonald, M. E.</b> : EPA's Environmental Monitoring and Assessment Program (EMAP): estuarine research challenges for the future
10:30 AM	<b>Weisberg, S. B.</b> ; Bay, S. M.; Beegan, C.: California's sediment quality objectives: use of multiple lines of evidence in regional assessments
10:45 AM	<b>Van Dolah, R. F.</b> ; Riekerk, G. H.; Jutte, P. C.; Felber, J.; Holland, A. F.; Chestnut, D. E.: An evaluation of relationships between estuarine habitat quality measures and upland cover patterns in coastal South Carolina watersheds
11:00 AM	<b>Genthner, F. J.</b> ; Friedman, S. D.: Challenges in the development of microbial indicators to assess coastal condition
11:15 AM	<b>Walker, H. A.</b> ; Kiddon, J.; Benyi, S.; Charpentier, M.; Cobb, D.; Copeland, J.; Galloway, W.; Hale, S.; Pesch, G.; Strobel, C.: Northeast coastal conditions: trends at the beginning of the 21st century?

11:30 AM **Collins, J. N.**; Sutula, M.; Stein, E.; Fetscher, A. E.; Grenier, L.; Gross, C.; Clark, R.; Burton, R.; Jones, P.; Potter, C.: A comprehensive approach to wetland assessment in coastal California

11:45 AM **Engle, V. D.**; Kurtz, J. C.; Smith, L. M.; Harwell, L. C.: Estimating biological condition in estuaries from watershed landscape characteristics: a case study in Pensacola Bay, Florida, USA

### SPS-16: Food Limitation in Estuarine Fauna

Chair(s):	Wim Kimmerer, Jan Thompson
Location:	Providence (S2)
4:15 PM	<b>Peterson, C. H.</b> : Responses of estuarine suspension-feeding bivalves to density and the implications for sustainable shellfisheries
4:30 PM	<b>Levinton, J. S.</b> : Temporal and spatial dynamics of food limitation in estuarine benthic deposit feeders
4:45 PM	<b>Pierson, J. J.</b> ; Leising, A. W.; Halsband-Lenk, C.; Horner, R. A.; Postel, J. R.; Frost, B. W.: Prey type effects on zooplankton production: a different view of food limitation
5:00 PM	<b>Thompson, J. K.</b> : Bivalves in a system with low production limit and are limited by phytoplankton productivity
5:15 PM	<b>Luckenbach, M.</b> ; Li, Y.; Wang, H.; Arnold, G.; Condon, E.: Estimating the effects of large-scale clam aquaculture on basin-level phytoplankton production and water quality
5:30 PM	<b>Lovvorn, J. R.</b> ; Takekawa, J. Y.: Food limitation in a shrinking habitat: diving ducks eating clams on San Francisco Bay shoals
5:45 PM	<b>Kimmerer, W. J.</b> : Ecosystem-level changes following disruption of the pelagic foodweb by an introduced clam in the northern San Francisco Estuary

### SPS-17: Ecological Indicators of Estuarine Change and Condition

Chair(s):	James Morris, Chet Rakocinski
Location:	York Hall (S4)
8:00 AM	<b>Brown-Peterson, N. J.</b> ; Brouwer, M.; Manning, S.; Denslow, N.: Cyclic hypoxia affects gene expression and reproduction in grass shrimp, <i>Paleomonetes pugio</i>
8:15 AM	<b>Cheek, A. O.</b> ; Landry, C. A.; Steele, S. L.; Sutton, A.; Manning, S.: Too breathless for sex: hypoxia as a regulator of estuarine fish reproduction

8:30 AM	<b>Murphy, C. A.</b> ; Rose, K. A.; Fuiman, L. A.; Alvarez, M. C.; McCarthy, I. D.; Diamond, S. L.; Thomas, P.: Using modeling to link the effects of contaminants on larval fish behavior to ecologically relevant endpoints	2:30 PM	Williams, S. L.; <b>Kunzelman, J. I.</b> ; Carranza, A.: Individual leaf fluorescence and reflectance: a miner's canary for salt marsh macrophytes?
8:45 AM	<b>Sokolowski, A.</b> ; Wolowicz, M.; Hummel , H.; Smolarz , K.: Abnormal features of the Baltic clam <i>Macoma balthica</i> ( <i>Bivalvia</i> ) in the Baltic Sea as indices of environmental changes?	2:45 PM	<b>Anastasiou, C. J.</b> ; Johansson, R.; Avery, W.: A method for determining seagrass light-depth requirements using beam-specific light attenuation in Tampa Bay, Florida
9:00 AM	<b>Jordan, S. J.</b> : Estuarine fish assemblages as indicators of large-scale ecological integrity	3:00 PM	<b>Rismondo, A.</b> ; Curiel, D.; Scarton, F.; Mion, D.: <i>Zostera noltii</i> and <i>Zostera marina</i> distribution in Venice lagoon (Italy): disturbance factors and ecological status
9:15 AM	<b>Vieira, J. P.</b> ; Garcia, A. M.: Between-decades comparison of the shallow-water fish assemblage of Patos Lagoon (32°S), southern Brazil	3:15 PM	<b>Stevenson, J. C.</b> ; Staver, K. W.; Staver, L. W.: A tale of two tributaries: trends in nutrient loadings and submersed vascular plant communities in the Choptank River and upper Chesapeake Bay
9:30 AM	<b>Rakocinski, C. F.</b> : Comparing the benthic index for the northern Gulf of Mexico with macrobenthic process-indicators of estuarine condition	3:30 PM	<b>Perry, C. L.</b> ; Carlson, P. R.; Lessmann, J. M.; Yarbro, L. A.; Ketron, A. D.; Arnold, H.: Nutrient composition of <i>Halodule wrightii</i> , <i>Syringodium filiforme</i> , and <i>Thalassia testudinum</i> in Florida's Big Bend region
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	BREAK 9:45am - 10:15am		
10:15 AM	<b>Wagner, M.</b> ; Allison, J.; Ederington-Hagy, M.; Lepo, J.; Snyder, R.: Spatial patterns of periphyton growth as indicators of estuarine condition	4:15 PM	<b>Burkholder, J. M.</b> ; Dickey, D. A.; Kinder, C. A.; Reed, R. E.; Mallin, M. A.; McIver, M. R.; Cahoon, L. B.; Brownie, C.: Increasing importance of ammonium in eutrophic estuaries
10:30 AM	<b>Allison, J.</b> ; Wagner, M.; Ederington-Hagy, M.; Lepo, J.; Snyder, R.: Benthic microalgal production as an indicator of estuarine condition	4:30 PM	<b>Nuzzi, R.</b> : The oligotrophication of the Peconic Estuary: a success story?
10:45 AM	Open	4:45 PM	<b>Pinckney, J. L.</b> ; Paerl, H. W.; Valdes-Weaver, L. M.: Using phytoplankton photopigments as a bioindicator for the condition of estuarine ecosystems
11:00 AM	<b>Brazner, J. C.</b> ; Danz, N. P.; Niemi, G. J.; Regal, R. R.; Hanowski, J. M.; Johnston, C. A.; Reavie, E. D.; Trebitz, A. S.; Johnson, L. B.; Howe, R. W.: Evaluating the effectiveness of Great Lakes coastal wetland indicators using multiple taxonomic groups: geographic and geomorphic influences	5:00 PM	<b>Waggener, A. L.</b> ; Winkelmann, V.; Paerl, H. W.; Weaver, L. M.: The chlorophyll <i>a</i> maximum as an indicator of estuarine physical-chemical-biotic interactions in the Neuse River Estuary, NC
11:15 AM	<b>Davey, E. W.</b> ; Perez, K. T.; Cardin, J. A.; Johnson, R. L.; Rocha, K. J.; Wigand, C.: Application of 2&3D computer-aided tomography to marine benthic and marsh communities	5:15 PM	<b>Pospelova, V.</b> : Dinoflagellate cysts as indicators of water quality conditions in Pacific Northwest estuaries
11:30 AM	<b>Wigand, C.</b> ; McKinney, R.; Chintala, M.; Brennan, P.: Community- and system-level responses of southern New England coastal salt marshes to cultural eutrophication		
11:45 AM	Poster Summaries		
<hr/>			
	POSTER SESSION and LUNCH 12noon - 2pm		
2:00 PM	<b>Watson, E. B.</b> ; Byrne, R.: San Francisco Estuary tidal marsh vegetation change		
2:15 PM	<b>Stankelis, R. M.</b> ; Soulent, H.; Boynton, W. R.; Smail, P.; Bailey, E. M.: Estimates of open-water ecosystem metabolism across the salinity gradient of the Patuxent River estuary		

2:45 PM	<b>Kremer, J. N.</b> : The case for simple and general estuarine models for ecosystem-based management
3:00 PM	<b>Brush, M. J.</b> : Assimilation of monitoring data and development of innovative systems models in support of ecosystem-based management
3:15 PM	<b>Cerco, C. F.</b> ; Noel, M. R.: Assessing the effects of native oyster restoration on Chesapeake Bay water quality
3:30 PM	<b>Madden, C. J.</b> ; McDonald, A. A.; Rudnick, D. T.: Ecosystem-based management of the southern Everglades and Florida Bay watershed
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Gregg, W. W.</b> : Global distributions of ocean phytoplankton functional groups in a 3-dimensional model
4:30 PM	Open
4:45 PM	<b>Simenstad, C. A.</b> ; Burke, J. L.: Classifying and characterizing a complex tidal freshwater-euhaline landscape: structure of the Columbia River estuarine ecosystem
5:00 PM	<b>Sobocinski, K. L.</b> ; Thom, R. M.; Borde, A. B.; Diefenderfer, H. L.; Burke, J. L.; Karnezis, J. P.: Using pilot monitoring at multiple spatial scales to develop a long-term monitoring program in tidal freshwater wetlands of the Columbia River, Washington
5:15 PM	<b>Borde, A. B.</b> ; Thom, R. M.; Evans, N.: An interactive conceptual model tool for coastal management
5:30 PM	<b>Buzzelli, C.</b> : Management-driven modeling to forecast spatial and temporal differences in coastal ecosystem production with altered oceanic, atmospheric, and watershed inputs
5:45 PM	<b>Burke, J. L.</b> ; Simenstad, C. A.; Bottom, D. L.; Jones, K. K.; Casillas, E.: What's missing: reconstruction and analysis of salmon habitat change in the Columbia River estuary

## SPS-26: Interactions through Estuarine Hydrology

Chair(s):	William Nuttle, Frank Marshall
Location:	M4
8:00 AM	Chairs' introduction
8:15 AM	Poster Summaries
8:30 AM	<b>Forbes, M. G.</b> ; Alexander, H. D.; Dunton, K. H.: Response of surface water salinity, salt marsh soils, and vegetation to increased freshwater inflows

8:45 AM	<b>Pae, W.</b> ; Kishida, H.; Ohno, Y.: Method for analysis of relationship between environmental impact and response caused by artificial action in river mouth area
9:00 AM	<b>Mashriqui, H. S.</b> ; Justic, D.; Kemp, G. P.; Dartez, D.: Modeling the impacts of pulsed riverine diversions on water quality in the Breton Sound Estuary, LA
9:15 AM	<b>Kemp, G. P.</b> ; Mashriqui, H. S.; Lane, R. R.; Day, J. W.; Teague, K.: Using SWAMPSUSTAIN to forecast coastal swamp forest response to reintroduction of Mississippi River water after a century of isolation
9:30 AM	<b>Lee, T. N.</b> ; Johns, E.; Melo, N.; Smith, R.; Ortner, P.; Smith, D.: On Florida Bay hypersalinity and water exchange
BREAK 9:45am - 10:15am	
10:15 AM	<b>Rudnick, D. T.</b> ; Kelly, S. P.; Coley, T. M.; Bennett, R. J.; McDonald, A. A.; Madden, C. J.: Ecological responses of Florida Bay to hydrologic restoration of the Everglades: a consideration of nutrient inputs
10:30 AM	<b>Marshall, F.</b> ; Smith, D.; Buckingham, C.: Using statistical models for salinity performance measures in Florida Bay and along the Southwest Gulf Coast
10:45 AM	<b>Smith III, T. J.</b> ; Anderson, G. H.: Salinity relationships in the coastal Everglades: apparent hydrological "disconnections" between tidal rivers and adjacent wetlands
11:00 AM	<b>Vlaar, T.</b> ; Anderson, G. H.; Nuttle, W. K.; Price, R. M.; Rivera-Monroy, V. H.; Smith III, T. J.; Torfs, P.; Twilley, R. R.: Hydrologic response of estuary groundwater to tides and freshwater flows in the Everglades National Park
11:15 AM	Open
11:30 AM	<b>Hunt, M. J.</b> ; Chamberlain, R. H.; Haunert, K. M.; Doering, P. H.: Quantifying ecological responses: application of experiments and modeling to predict SAV density relative to hydrologic variability
11:45 AM	<b>Haunert, D. E.</b> : Effects of increasing watershed base flows on the eastern oyster in the Loxahatchee River Estuary, Florida

### Request from the Session Conveners

As a courtesy to all, please plan to place your cell phone on buzzer or turn it off when you enter the oral session rooms.

## SPS-27: Recruitment Processes in Estuarine Fishes

Chair(s): Fred Scharf, Jeff Buckel

Location: M3

8:00 AM **Cowan, J. H.**; Grimes, C. B.: The Mississippi River plume: an estuary without boarders

8:15 AM **Martino, E. J.**; Houde, E. D.: Sources of variability and stability in recruitment of Chesapeake Bay striped bass

8:30 AM **Taylor, J. C.**; Miller, J. M.; Dickey, D. A.; Ross, S. W.; Pietrafesa, L. J.: Recruitment patterns of fishes among estuarine nurseries in Pamlico Sound, NC: links to physics and implications for year-class strength and EFH evaluations

8:45 AM **Quinlan, J. A.**; Manderson, J. P.; Shaheen, P.; Sibunka, J.; Law, C. G.; Noji, C.: Atlantic menhaden spawn in cool water in the New York Bight Apex

9:00 AM **Miller, T. J.**; Peer, A. C.: Correlated recruitments in coupled age-structured models: menhaden and striped bass

9:15 AM **Wuenschel, M. J.**; Hare, J. A.; Denit, K.; Sponaugle, S.: Energetics of juvenile gray snapper: evaluation of abiotic and biotic properties of nursery areas across a latitudinal gradient

9:30 AM Patterson, H. M.; **McBride, R. S.**; Julien, N.: Population structure of red drum (*Sciaenops ocellatus*) as determined by otolith chemistry

BREAK 9:45am - 10:15am

10:15 AM **Rooker, J. R.**; Holt, S. A.; Gill, G. A.; Stunz, G. W.: Application of otolith chemical analysis to determine the connectivity between early life and adult habitats of red drum

10:30 AM **Searcy, S. P.**; Eggleston, D. B.; Hare, J. A.: What determines recruitment success of estuarine fishes?

10:45 AM **Luthy, S. A.**; Buckel, J. A.; Grist, J. D.: Factors affecting recruitment of white perch and yellow perch in Albemarle Sound, North Carolina

11:00 AM **Stewart, C. B.**: Spatial and temporal variability in recruitment timing and relative abundance of juvenile red drum (*Sciaenops ocellatus*) in southeastern North Carolina

11:15 AM Tuomikoski, J. E.; Rudershausen, P. J.; **Buckel, J. A.**; Hightower, J. E.: Effects of age-1 striped bass predation on juvenile fishes in western Albemarle Sound, North Carolina

11:30 AM **Moser, S. M.**; Conover, D. O.: Incorporating uncertainty about the recruitment dynamics into the estimation of striped bass reference points

11:45 AM **Kraus, R. T.**; Secor, D. H.: Significance of temporal and spatial recruitment variability for white perch in Chesapeake Bay

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM **Clarke, P. J.**; Juanes, F.: Winter recruitment of young-of-the-year bluefish, *Pomatomus saltatrix*, into a Northeast Florida Estuary

2:15 PM **Candelmo, A. C.**; Deshpande, A.; Weis, J. S.: Behavior and condition responses of young-of-the-year bluefish (*Pomatomus saltatrix*) to contaminants via trophic transfer

2:30 PM **Litvin, S. Y.**; Weinstein, M. P.; Guida, V. G.; Grottoli, A. G.: Considering the production of fish on the scale of the estuary: insights from multidisciplinary approach.

2:45 PM **Del Toro-Silva, F. M.**; Miller, J. M.; Ellis, T. A.: Evaluation of southern flounder nursery habitat through fish metabolic capacity

3:00 PM **Glass, L. A.**; Rooker, J. R.: Habitat use by newly settled southern flounder (*Paralichthys lethostigma*) in the Galveston Bay estuary

3:15 PM **Meyer, G. F.**; Luczkovich, J.; Brinson, M. M.; West, T.: Analysis of potential effects of land use alteration on juvenile fish and invertebrate populations in North Carolina's primary nursery areas

3:30 PM **Overton, A. S.**; Rulifson, R. A.: Temporal and spatial population dynamics of diadromous larval fishes in the lower Roanoke River estuary

BREAK 3:45pm - 4:15pm

4:15 PM **Wyllie-Echeverria, T.**; Barsh, R.; Fresh, K.; Beamer, E.; Wyllie-Echeverria, S.: The journey of juvenile salmonids moving through San Juan County, Puget Sound, Washington

4:30 PM **Targett, T. E.**; Stierhoff, K. L.; Tyler, R. M.: Responses of juvenile weakfish and summer flounder to hypoxia in estuarine nursery habitat: a combined laboratory and field approach

4:45 PM **Craig, J. K.**; Rice, J. A.; Rose, K. A.: Oxygen dynamics in estuarine nursery habitats: evaluating the effects of hypoxia on juvenile fishes using a spatially-explicit, individual-based model

5:00 PM **Brady, D. C.**; Tuzzolino, D. M.; Targett, T. E.: Hypoxia-induced searching strategies of juvenile weakfish: how do interacting kineses facilitate hypoxia avoidance and survival?

5:15 PM **Jung, S.**; Houde, E. D.: Variability in recruitment and productivity of bay anchovy in Chesapeake Bay

- 5:30 PM **Kowalski, J. L.**; Allison, T. C.: Phenology of *Halodule wrightii* (shoal grass) in Lower Laguna Madre, Texas: implications for natant fauna

### **SPS-28: Interdisciplinary Approach to Research in Tropical Seagrass and Mangrove Ecosystems**

Chair(s): Ilka "Candy" Feller, William Dennison

Location: Poplar Hall (S1)

*Interactive posters may be viewed in Poplar Hall during the oral presentations of this session*

- 8:00 AM **McKee, K. L.**; Feller, I. C.; Lovelock, C. E.: A global comparison of belowground responses by mangroves to nutrient enrichment
- 8:15 AM **Carruthers, T. J.**; Dennison, W. C.; Barnes, P. A.; Fourqurean, J. W.; van Tussenbroek, B. I.: Nutrient interactions of *Thalassia testudinum* in high and low rainfall Caribbean systems
- 8:30 AM **Joye, S. B.**; Feller, I. C.; Lee, R. Y.: Primary production and nutrient fluxes in mangrove soils and microbial mats
- 8:45 AM **Koch, M. S.**; Schopmeyer, S. A.; Kyhn-Hansen, C.; Nielsen, O.; Madden, C.: A conceptual model for seagrass die-off in Florida Bay based on mesocosm and field experiments
- 9:00 AM **Rivera-Monroy, V. H.**; Ewe, S.; Twilley, R. R.; Coronado-Molina, C.; Castaneda, E.; Grahl, T. J.: Scrub mangrove forest growth patterns and above-belowground productivity in Taylor River, Everglades National Park, Florida, USA
- 9:15 AM **Boettcher, A. A.**; Arnold, T.; Tanner, C. E.; Sherman, T. D.: Disease resistance in seagrass: plant level or environmental control?
- 9:30 AM **Berger, U.**: Seeing the forest through the trees: pattern-oriented modeling of neotropic mangrove forests

BREAK 9:45am – 10:15am

- 10:15 AM **Lovelock, C. E.**; Feller, I. C.; Ellis, J.; Schwarz, A.; McKee, K. L.; Hancock, N.; Nicholls, P.; Sorrell, B.: Contrasting responses of two New Zealand mangroves to nutrient enrichment
- 10:30 AM **Feller, I. C.**; Lovelock, C. E.: Responses to nutrient enrichment in nitrogen- vs. phosphorus-limited mangrove forests
- 10:45 AM **Gallegos, C. L.**; Biber, P. D.: Effects of eutrophication on light penetration and implications for seagrass communities: looking beyond the obvious

- 11:00 AM **Teichberg, M. C.**; Fox, S. E.; Olsen, Y.; Valiela, I.: Experimental and comparative study on macroalgal response to nutrient enrichment and grazing in a tropical mangrove and seagrass ecosystem

- 11:15 AM **Fourqurean, J. W.**; Escoria, S. P.: Long-term patterns of eutrophication in south Florida seagrass beds: water quality, species composition, and chemical proxies
- 11:30 AM **Borgatti, R.**; O'Neil, J. M.; Dennison, W. C.; Feller, I. C.: Effects of nutrient enrichment on nitrogen fixation in the mangrove microbial communities in Bocas del Toro, Panama
- 11:45 AM Poster Summaries

### **SPS-29: Hydrodynamics of Coral Reefs and Seagrass Beds: Implications for Ecological Function, Management and Restoration**

Chair(s): Greg Piniak, Shay Viehman, M. Fonseca, J. Kenworthy, H. Lenihan

- Location: M6
- 2:00 PM **Wyllie-Echeverria, S.**; Pulich, W. M.; Mumford, Jr., T. F.; Hu, N.: Landscape patterning in the seagrass flora: can shifts at wide spatial scales forecast system stability?
- 2:15 PM **Lacy, J. R.**; Harney, J. N.; Wyllie-Echeverria, S.; Gelfenbaum, G.: A field study of the influence of eelgrass on currents and waves in Puget Sound
- 2:30 PM **Koch, E. W.**; Fonseca, M. S.; Malhotra, A.; Wicks, E. C.: Wave exposure or sediment characteristics: what is limiting the distribution of *Zostera marina* (eelgrass) in Chincoteague Bay, MD, USA?
- 2:45 PM **Chen, S. N.**; Sanford, L. P.; Koch, E. W.; Shi, F.; North, E. W.: The influences of seagrass beds on wave attenuation and suspended sediment transport: numerical studies and field observations
- 3:00 PM **Presto, M. K.**; Ogston, A. S.; Storlazzi, C. D.; Field, M. E.: Mechanisms and controls on sediment resuspension on a shallow, fringing reef flat
- 3:15 PM **Burke, J. S.**; Kenworthy, W. J.; Viehman, S.; Bonn, C.: Composition and abundance of fish communities utilizing bank channels in south Florida
- 3:30 PM **Di Carlo, G.**; Benedetti-Cecchi, L.; Badalamenti, F.: Effect of anthropogenic disturbance on the seagrass *Posidonia oceanica* (L.) Delile: response of plant production to two impacts of different magnitude

## SPS-30: Estuarine Science at Primarily Undergraduate Institutions: Opportunities for Teaching and Research

Chair(s): Drew Ferrier, Bob Paul

Location: M5

- 2:00 PM **Huzzey, L. M.**: Student field studies of estuarine physics: a tool for inquiry-based learning
- 2:15 PM **Rhode, J. M.**: Marsh microcosms are useful model systems in undergraduate laboratory courses
- 2:30 PM **Bankey, L.**; Nemerson, D.: The Minority Conservation Work-Study Program at the National Aquarium in Baltimore
- 2:45 PM **Cuker, B. E.**; Cutter, G. A.: Multicultural students At Sea Together: promoting ethnic diversity and interdisciplinary education in the aquatic sciences
- 3:00 PM **Paul, R. W.**: Undergraduates serving the community through research, public outreach and environmental education
- 3:15 PM **Albaugh, R. L.**; Foley, M. J.; Ferrier, M. D.: Enhancing student learning experiences by integrating community-based research within an estuarine studies program
- 3:30 PM **Jivoff, P. R.**; Andyshak, A.; Liff, H.: Experiential opportunities for undergraduate students in estuarine science at Rider University

BREAK 3:45pm - 4:15pm

- 4:15 PM **Dame, R. F.**; Young, R.: The development and emergence of successful young estuarine scientists: a lesson in positive reinforcement
- 4:30 PM **Fuller, S. W.**: Evolution of undergraduate research at a small liberal arts college
- 4:45 PM **Stribling, J. M.**: A collaborative program in environmental science highlights estuarine studies for undergraduates on Maryland's Eastern Shore
- 5:00 PM **Jones, T. W.**: Accepting a position at a primarily undergraduate university: what to look for to support your research with undergraduates

## SPS-33: Impact of Direct Groundwater Inputs to Estuarine Studies

Chair(s): Douglas Miller, Thomas McKenna

Location: M2

- 2:00 PM **Simonds, F. W.**; Paulson, A. J.; Rosenberry, D.: Ground-water discharge and nitrate loading to Hood Canal, Washington

- 2:15 PM **Kroeger, K. D.**; Charette, M. A.; Swarzenski, P. W.; Crusius, J.; Bratton, J. F.: Contrasting nitrogen biogeochemistry and fluxes from a temperate and a subtropical coastal aquifer
- 2:30 PM **Hays, R. L.**; Ullman, W. J.: Groundwater seepage and associated nutrient fluxes at Cape Henlopen, Delaware
- 2:45 PM **Dale, R. K.**; Miller, D. C.: The impact of intertidal groundwater seeps on the benthos
- 3:00 PM **Mir-Gonzalez, D. L.**; Boyer, J. N.: The effect of groundwater nutrient discharge on benthic macrophyte communities in southwestern Biscayne Bay, Florida
- 3:15 PM **Volk, J. A.**; Savidge, K. B.; Scudlark, J. R.; Andres, A. S.; Ullman, W. J.: Nutrient loadings to Rehoboth Bay, Delaware, from baseflow, stormflow, underflow, atmospheric and point sources

## SPS-34: Assessment and Management of PAH Contaminated Sediments

Chair(s): Sue Kane Driscoll, Charles Menzie

Location: M1

- 2:00 PM **Rice, S. D.**; Short, J.; Lindeberg, M.; Bodkin, ,; Ballachey, .: Exxon Valdez oil contamination of intertidal sediments: PAH persistence, bioavailability, and long term effects
- 2:30 PM **Culbertson, J. B.**; Valiela, I.; Peacock, E. E.; Reddy, C.; Carter, A.: Continued effects on the salt marsh fiddler crab, *Uca pugnax*, following long-term petroleum hydrocarbon exposure
- 2:45 PM **Collier, T. K.**; Anulacion, B. F.; Sol, S. Y.; Ylitalo, G. M.; Johnson, L. J.: PAH-induced impairment of fish health in Puget Sound/Georgia Basin and Kitimat Arm, BC: contaminant sources vs contaminant effects
- 3:00 PM **Di Giulio, R. T.**; Billiard, S. M.; Meyer , J. N.; Wassenberg, D. M.; Hodson, P.V.: Synergistic developmental toxicity of polycyclic aromatics hydrocarbons: towards a mechanistic understanding
- 3:15 PM Poster Summaries

BREAK 3:45pm - 4:15pm

- 4:15 PM **Incardona, J. P.**; Carls, M. G.; Collier, T. K.; Scholz, N. L.: Cytochrome P4501A induction is not causal but protective in the early life stage toxicity of petrogenic polycyclic aromatic hydrocarbons (PAHs)
- 4:30 PM **Kane Driscoll, S. B.**; McArdle, M.; Amos, C. B.; Menzie, C. A.; Coleman, A.: Development of a database of toxic doses of PAHs to fish

4:45 PM	<b>Watts, A. W.</b> ; Ballesteros, T. P.: PAH uptake in wetland plants
5:00 PM	Runcie, J.; Macinnis-Ng, C.; <b>Ralph, P. J.</b> : Do water-soluble petrochemicals damage seagrass photosynthesis?
5:15 PM	<b>Menzie, C. A.</b> : Evaluating the ecological and human health risks associated with PAH-contaminated sediments

### **SYM-03: Examining Nutrient Enrichment Effects on Coastal Ecosystems through Comparative Ecological Approaches and Perspectives**

Chair(s):	Jim Hagy, Giancarlo Cicchetti, Ruth Carmichael, Scott Nixon
Location:	Stratford (S3)
8:00 AM	<b>Valiela, I.</b> ; Martinetto, P.; Teichberg, M.; Tomasky, G.: Watershed-estuary coupling: biological, chemical and isotopic evidence
8:30 AM	<b>Alber, M.</b> ; Pomeroy, L. R.; Sheldon, J. E.; Schaefer, S. C.: Forty years of watershed nitrogen inputs and estuarine response in the Altamaha River (Georgia, USA)
8:45 AM	<b>Osher, L. J.</b> ; Jespersen, J.; Rouleau, P.: Isotopic investigations of the benthos in a downeast Maine estuary: quantification of terrestrial nutrient inputs and impacts over space and time
9:00 AM	<b>Kaldy, J. E.</b> : <sup>15</sup> N evidence for seasonal oscillations in nitrogen sources controlling “green tides” in Oregon estuaries
9:15 AM	<b>Cebrian, J.</b> ; Stutes, A. L.; Corcoran, A. A.; Stutes, J. P.; Hunter, A. E.: Impact of sediment nutrient enrichment on benthic microalgal communities: a comparison between clear coastal lagoons and turbid estuaries
9:30 AM	Poster Summaries

BREAK 9:45am – 10:15am

10:15 AM	<b>Frankovich, T. A.</b> ; Gaiser, E. E.; Armitage, A. R.; Fourqurean, J. W.: Effects of nitrogen and phosphorus fertilization on epiphytic diatom communities
10:30 AM	<b>Goebel, N. L.</b> ; Kremer, J. N.; Edwards, C. A.: A simplified approach to modeling keystone processes that lead to hypoxic events in Long Island Sound
10:45 AM	<b>Hagy, J. D.</b> ; Lehrter, J. C.; Murrell, M. C.; Kurtz, J. C.: Comparative analysis of the susceptibility of estuaries to hypoxia

11:00 AM **MacIntyre, H. L.**; Stutes, A. L.; Smith, W.; Dorsey, C.; Murray, D.; Granade, H. R.; Abraham, A.; Dickey, R. W.; Leighfield, T.: Water quality, mixing and harmful algal blooms (HABs) in Mobile Bay, Alabama

11:15 AM **Lewitus, A. J.**; Burke, M. K.; Mason, L. J.; McCracken, K. N.; Drescher, S. R.; Strosnider, W. H.: Brackish stormwater detention ponds in South Carolina are eutrophic hot spots for HABs and may promote estuarine eutrophication

11:30 AM **Ramanathan, A. L.**; Bala Krishna Prasad, -: Transport and behavior of nutrients in the estuarine-mangrove complex in the Cauvery River basin, SE coastal area of India before and after tsunami impact

11:45 AM Poster Summaries

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM **Warren, R. S.**; Miller, E. E.; Jones, R. M.; Shields, E. C.: *Spartina alterniflora* and *Spartina patens* growth and production responses to experimental, low-level eutrophication in a northern MA estuary

2:15 PM **Bowen, J. L.**; Crump, B. C.; Deegan, L. A.; Hobbie, J. E.: Nitrogen enrichment of a New England salt marsh: changes in bacterial production and microbial community composition

2:30 PM **York, J. K.**; Valiela, I.; Repeta, D. J.: Estuarine response to nitrogen loading: comparison of Childs River, MA and Tijuana River, CA

2:45 PM **Keller, D. P.**; Hood, R. R.: Modeling the sources, sinks, and transformation of dissolved organic nitrogen in estuarine and coastal waters

3:00 PM **Smith, K.**; Aftanas, F.; Caffrey, J. M.: Comparing nitrification and nutrient dynamics in three estuaries: Weeks Bay, AL; Pensacola Bay, FL; and Duplin River, GA

3:15 PM **Lehrter, J. C.**; Pennock, J. R.; Kiene, R. P.: A comparative analysis of nutrient loading, estuarine nutrient fluxes and NEM in three tidal river estuaries differing primarily by watershed land-use types

3:30 PM **Montagna, P.**: Effect of freshwater inflow and nutrient loading on infaunal benthos among Texas estuaries

BREAK 3:45pm – 4:15pm

4:15 PM **Carmichael, R. H.**; Valiela, I.: Mechanisms and linkages relating eutrophication to bivalve secondary production in shallow coastal estuaries

4:30 PM	<b>Chesney, E. J.</b> ; Switzer, T. S.; Baltz, D. M.: Patterns in the expression of fishery production: perspectives based on nekton abundance in a highly productive coastal ecosystem
4:45 PM	<b>Deegan, L. A.</b> ; Peterson, B. J.; Hopkinson, C.; Hobbie, J. E.; Vallino, J.; Fleeger, J.; Warren, S.; Friedrichs, C.; Sheldon, A.: TIDE: evaluating the combined effects of increased nutrients and the loss of species on the sustainability of salt marsh ecosystems
5:00 PM	<b>Josefson, A. B.</b> ; Hansen, J. L.: Increasing water residence time in some estuaries promotes secondary productivity but decreases diversity
5:15 PM	<b>Breitburg, D. L.</b> : Predicting effects of eutrophication and overfishing on upper trophic levels in estuarine food webs: disentangling effects of multiple stressors
5:30 PM	<b>Brush, M. J.</b> ; <b>Latour, R. J.</b> : Coupling top-down, multispecies fisheries models to simplified nutrient-plankton models in support of nutrient and multispecies management in Chesapeake Bay
5:45 PM	<b>Latimer, J.</b> ; Cicchetti, G.; Keith, D.; Rego, S.; Dettmann, E.; Coiro, L.; Bergen, B.; Nelson, W.; McKinney, R.; Charpentier, M.: Derivation of nitrogen load–ecological response models in southern New England embayments using a comparative systems approach

### SYM-06: Managing River Basins and Estuaries: an International Assessment of Approaches and Progress

Chair(s):	James Latimer, Suzanne Bricker, Alice Newton
Location:	Providence (S2)
8:00 AM	<b>Dowell, M. D.</b> ; Cardoso, A. C.; Eisenreich, S.: A pan-European framework for assessing eutrophication: across different aquatic environments and policies
8:15 AM	<b>Claussen, U.</b> ; Zevenboom, W.; Brockmann, U.; Bot, P.V.: Pan-European assessment of the eutrophication status of rivers, lakes and marine waters
8:30 AM	<b>Davis, I. F.</b> ; Parker, A.: USEPA National Nutrient Criteria Development Program: an update for estuaries criteria
8:45 AM	<b>Magnien, R.</b> ; Boesch, D.; Scavia, D.; Dennison, W.: Goal-setting as a driver in managing coastal eutrophication
9:00 AM	<b>Brush, G. S.</b> : The role of retrospective analysis in coastal management
9:15 AM	<b>Buddemeier, R. W.</b> ; Maxwell, B. A.; Smith, S. V.; Swaney, D. P.; Bricker, S. B.: Tool and data needs for eutrophication assessment and management

9:30 AM	<b>Newton, A.</b> ; Ferreira, J. G.; Nobre, A. M.; Simas, M. T.; Silva, M. C.; Meirinho, A.; Bricker, S. B.; Wolff, W. J.: A methodology for defining homogeneous water bodies in transitional and coastal waters under the EU Water Framework Directive
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BREAK 9:45am - 10:15am

10:15 AM	<b>Ferreira, J. G.</b> ; Bricker, S. B.; Nobre, A. M.; Zhang, X. L.; Zhu, M. Y.: Research and screening models for science and management – integrated assessment of ecological balance and sustainability in coastal zones
10:30 AM	Bricker, S. B.; <b>Smith, S. V.</b> ; Ferreira, J. G.; Nobre, A.; Dettmann, E.; Latimer, J.: Assessment of eutrophication: a comparison of methods applied to Barnegat Bay
10:45 AM	<b>Smith, R. A.</b> ; Alexander, R. B.; Schwarz, G. E.: Investigating reciprocal relationships between the nation's inland and coastal water quality goals
11:00 AM	<b>Valiela, I.</b> ; Ramstack, J. M.; Bowen, J. L.: Land-derived nitrogen loading to estuaries: fundamentals, models, and management options
11:15 AM	<b>Lipton, D.</b> : The economic benefits of reducing eutrophication
11:30 AM	<b>Wazniak, C.</b> ; Hall, M.: Resource based thresholds for assessing water quality
11:45 AM	<b>Stacey, P. E.</b> ; Tedesco, M. A.: Water quality improvements from nitrogen management in Long Island Sound and its watershed

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM	<b>Greening, H.</b> ; Raulerson, G.; Tomasko, D.: Eutrophication reversal associated with nutrient management in two subtropical estuaries: Tampa and Sarasota Bays, Florida, USA
2:15 PM	<b>Powell, G. L.</b> : Environmental flows for rivers and estuaries
2:30 PM	<b>Sane, M.</b> ; Yamagishi, H.; Tateishi, M.: Morpho-sedimentary impacts of the construction of water-control structures along the Shinano River, Japan
2:45 PM	Discussion

### SYNTHESIS SESSION 1

#### Interactions with Estuarine Physics

Location: M6  
Time: 4:15-6:00 PM

## Mid-Day Poster Session - Tuesday

Poster presenters should be available to answer questions during the lunch hours.

Lunch will be provided in the poster hall.

The letter and number represents the poster position within the hall;  
see page 110 for a map of the poster hall positions.

Each poster will be available for viewing for one full day: 9:00 AM - 6:00 PM.

**12:00 PM – 2:00 PM · Hampton Roads Ballroom (Marriott)**

TUESDAY

POSTERS

### Interdisciplinary Approach to Research in Tropical Seagrass and Mangrove Ecosystems

- A1. **Quarles, R. L.**; Derereux, R.: Biomass allocation and plant production in *Thalassia testudinum* sea grass beds of Santa Rosa Sound, NW Florida
- A2. **Devereux, R.**; Yates, D. F.; Cherry, J. S.; James, J. B.; Rivord, J. A.; Quarles, R. L.: Sulfate reduction and porewater nutrient profiles in *Thalassia testudinum* seagrass bed sediments of Santa Rosa Sound, NW Florida
- A3. **Uhrin, A. V.**; Hall, M. O.; Fonseca, M. S.: Evaluation of mechanized transplanting of two tropical seagrasses in Sarasota Bay, Florida
- A4. **Merello, M. F.**; Kenworthy, W. J.; Hall, M. O.; Berns, D.; Ferenc, K.; Hall, F.; Hyniova, J.: Scientific evaluation of methods for the biophysical stabilization and restoration of damaged seagrass meadows
- A5. **Wolfe, B. S.**; Zieman, J. C.: Seagrass canopy light dynamics
- A6. **Hall, M. O.**; Ferenc, K.; Berns, D.; Merello, M.; Hall, F.; Hyniova, J.; Kenworthy, W. J.: Developing techniques to enhance the recovery rates of propeller scars in Florida turtlegrass meadows
- A7. **Meads, M. V.**; Dawes, C. J.: Effects of short shoot number, presence of an apical meristem, and growth period on rhizome elongation of *Thalassia testudinum* in Tampa Bay

### Physical and Biological Interactions

- A8. **Kuwae, T.**; Kamio, K.; Inoue, T.; Miyoshi, E.; Uchiyama, Y.: Sediment-water oxygen flux measured by the eddy-correlation method in an intertidal sandflat

- A9. **Holm, H. E.**; Luther, M. E.; Meyers, S. D.; Seiter, J.; Sopkin, K.; Wilson, M.; Linville, A.; Subramanian, V.; Gilbert, S.: Lagrangian analysis of harmful algal blooms and human pathogens within the Tampa Bay estuary
- A10. **Wozniak, A.**; Blake, R.; Gerald, L.; Wikel, G.; McNamee, K.; Geisz, H.; Haas, L.: Hydrodynamic influence on nutrient limitation and species composition of the York River, VA spring bloom
- A11. **Davis, S. E.**; Roelke, D.; Gable, G.; Li, H. P.; Miller, C. J.: Physical, chemical, and biological responses to inflow events in Galveston and San Antonio Bays (TX): bay-wide characterizations
- A12. **Sloan, R. M.**; Kamer, K.; Lackey, J.: Investigation of a unique, annual juvenile steelhead mortality event in a central California coastal lagoon
- A13. **Hoffman, J. C.**; Bronk, D. A.; Olney, J. E.: Terrestrial subsidies to zooplankton and anadromous fish production in a coastal plain tributary
- A14. **de Vries, M. B.**; van Kessel, T.; van Loon, A. F.; de Koning, J.: The influence of benthos on the transport and distribution of fine sediment in the Wadden Sea
- A15. **Bossart, J.**; Mendelsohn, D.; Goodrich, M.; Shaffer, D.: Hydrodynamic control of salinity within tidal freshwater and oligohaline marshes along the lower Savannah River estuary
- A16. **Howard-Strobel, M. M.**; Bohlen, W. F.; Cohen, D. R.: The temporal variability of bottom dissolved oxygen concentrations during hypoxia in western Long Island Sound
- A17. **Croft, A. L.**; Leonard, L. A.; Childers, D.; Mitchell-Bruker, S.; Solo-Gabriele, H. M.: Observations of sheet flow in the Everglade's ridge and slough landscape

- A18. **Talke, S. A.**; de Jonge, V. N.; de Swart, H. E.: Measuring and modelling biological and physical parameters at the estuary turbidity maximum on a river with high sediment concentrations (Ems estuary)
- A19. **Koepfle, E.**; Sundareshwar, P.V.; Akman, O.: Nutrient and organic matter response to climate change in the North Inlet ecosystem
- A20. **Silverman, N. L.**; McIvor, C. C.: Assessing the consequence of hurricane-induced habitat conversion on fish and decapod crustaceans in the Big Sable Creek complex of Southwest Florida

### Ecosystem-Based Management

- B1. **Yanez-Arancibia, A.**; Day, J. W.: A conceptual model for coastal ecosystem-based management in the Gulf of Mexico
- B2. **McDonald, A. A.**; Madden, C. J.: Use of a dynamic ecological model for ecosystem-based management of the Florida Bay seagrass community
- B3. **Corbett, C. A.**; Hale, J. A.: Development of water quality targets for Charlotte Harbor, Florida using seagrass light requirements
- B4. **Hedgepeth, M. Y.**; Roberts, R. E.: Vegetation, hydrology, and soil relationships within a tidal and riverine blackwater river floodplain on the Loxahatchee River, Southeast Florida
- B5. **Lane, R. R.**; Day, J. W.; Day, J. N.; Lindsey, J.: Treated municipal effluent as a restoration resource for coastal wetlands in Louisiana
- B6. **Wilbur, A. R.**: Challenges in developing an eelgrass management plan for a state that contains two biogeographic provinces
- B7. **Lipsky, A. A.**: Development and testing of an eelgrass restoration site selection model for Narragansett Bay, Rhode Island
- B8. Steward, J. S.; **Green, W. C.**: An empirical, seagrass-based approach to establishing pollutant load limits for the Indian River and Banana River Estuaries, Florida

### Atmospheric Inputs of Nutrients and Contaminants to Estuaries

- B9. **Dunn, J. C.**; Mitra, S.: Historical inputs of black carbon to the Chesapeake Bay
- B10. **Haag, J. E.**; Gao, Y.: Input of atmospheric inorganic nitrogen to Great Bay in southern New Jersey and its potential effects on coastal primary productivity

- B11. **Sopkin, K. L.**; Mizak, C. A.; Gilbert, S. A.; Subramanian, V.; Luther, M. E.; Poor, N. D.: Comparison of estimates of air-water fluxes for Tampa Bay, Florida
- B12. **Scudlark, J. R.**; Savidge, K. B.; Clark, R.; Teel, W. S.: Concentrations and deposition of gaseous ammonia and precipitation ammonium in high ammonia emission density regions of the Chesapeake airshed

### Connecting Estuarine and Great Lakes Health and Human Health

- B13. **Dickhoff, W. W.**; Varanasi, U.; Stein, J. E.; Collier, T. K.; Strom, M. S.; Trainer, V. L.; Iwamoto, R. N.; Senauer, A. M.: NOAA's West Coast Center for Oceans and Human Health
- B14. **Chapman, R. W.**; Jenny, M. J.: EcoGenomics, transcript profiling, oceans and human health
- B15. **White, D. L.**; Dabney, D.; Dowdy, D.; Porter, D. E.: Data and information management in support of the NOAA Hollings Marine Laboratory (HML) and Oceans and Human Health Initiative (OHHI)
- B16. **Fong, T.**; Ives, R.; Singh, S.; Molloy, S. L.; Phanikumar, M. S.; Rose, J. B.: Impacts of *Cryptosporidium* and *Giardia* accumulation in sediments on water quality and public health in the Great Lakes
- B17. **Lovelace, G.**; Murphy, J.; Love, D. C.; Sobsey, M. D.: F+ RNA coliphages as viral indicators of fecal contamination in estuarine water and shellfish
- B18. **Rick, J. J.**; Rick, S.; Fuentes, S.; Noel, J. L.: Noxious cyanobacteria and Mississippi River diversions
- B19. Lovelace, S.; **Keener-Chavis, P.**; McArthur , D.; Varner, C.: Research opportunities at the NOAA Centers of Excellence in Oceans and Human Health
- B20. **Gunster, D. G.**; Brawley, J. W.; Wisneski, C. L.; Gnatek, M. A.; Teague, K.: An assessment of potential ecological and human health risks and benefits of a proposed redistribution of Mississippi River water into the Maurepas Swamps

### Assessment and Management of PAH Contaminated Sediments

- C1. **Desbiens, I.**; Pelletier, E.: PAHs distribution in the Saguenay Fjord system and the St. Lawrence Estuary (Qc Canada)
- C2. **Barthe, M.**; Pelletier, E..: Comparison between chemical extraction methods and bioaccumulation of PAHs in estuarine sediments

## Restoring and Protecting the World's Estuaries – Comparing Exemplary Programs

- C3. **Burrows, F. M.**; Merkey, D. H.; Thayer, G. W.; McTigue, T. A.; Nickens, A. D.; Lozano, S.; Bellmer, R.; Gayaldo, P.: Science based restoration monitoring of coastal habitats: Vol. II. Tools for monitoring coastal habitats
- C4. Teutli-Hernandez, C.; Zaldivar-Jimenez, A.; **Herrera-Silveira, J. A.**: Indicator of hydrological restoration success on mangrove areas at the northern coast of Yucatan, Mexico
- C5. **Brumbaugh, R. D.**; Beck, M. W.; Bortman, M.; DeBlieu, J.; White, J.: The Nature Conservancy's Shellfish Restoration Network - a national platform for estuarine research, restoration and conservation
- C6. **Collins, L. J.**: Soup to nuts: Chalk Point Oil Spill Restoration
- C7. **Capone, M. K.**: The effect of oyster restoration reefs on water quality in Great Bay, NH

## Developing Useful Modeling and Mapping Tools to Help Managers Address Sea Level Rise

- C8. **Rader, D. R.**: Climate change and sea-level rise: implications for managing the marine and estuarine ecosystems of the southeastern United States
- C9. **Pietrafesa, L. J.**; Dickey, D. A.; Xie, L.; Peng, M. C.; Bao, S. W.: Sea level variability: trends and rates along US coastal waters

## Food Limitation in Estuarine Fauna

- C10. **DeWitt, T. H.**; Adine, J.; St. Clair, R.; Nipp, L.; Strickland, S.; Jones, E.; Dudoit, C.; Foster, J.: Response of ghost shrimp (*Neotrypaea californiensis*) bioturbation to organic matter enrichment of estuarine intertidal sediments
- C11. **Veloza, A. J.**; Tang, K. W.; Chu, F. E.: Trophic modification of essential fatty acids by heterotrophic protists and its effects on the biochemical composition of *Acartia tonsa*

## Environmental Physiology and Behavior

- C12. **Mozdzer, T. J.**; Zieman, J. C.; McGlathery, K. J.: Dissolved organic nitrogen: a neglected pool of bioavailable nitrogen in temperate tidal marsh systems
- C13. **Kahn, A. E.**; Durako, M. J.: *Thalassia testudinum* Banks ex König seedling responses to changes in salinity and nitrogen levels
- C14. **Pregnall, A. M.**; Crouch, C. M.; Heffner, L. R.: Ammonium and nitrate assimilation by *Ulva lactuca* in hypoxic coastal pond mesocosms

- C15. **Watson, A. M.**; Mulholland, M. R.; Bernhardt, P. W.; Rocha, A. M.; Salerno, M.: A comparison of inorganic and organic <sup>15</sup>N and <sup>13</sup>C uptake by *Proterocentrum minimum* in field and culture studies

- C16. **Atkinson, B. K.**: Skeletochronological analysis of a northern diamondback terrapin population (*Malaclemys terrapin*) on the Cape May peninsula of southern New Jersey

- C17. **Richards, C. L.**; Donovan, L. A.; Mauricio, R.: Selection, but no local adaptation, of plant physiological traits in contrasting salt marsh environments

- C18. **Cohen, R. A.**; Wilkerson, F.; Carpenter, E. J.; Dugdale, R.: How does nutrient availability relate to primary productivity in natural and restored wetlands in the San Francisco Estuary?

- C19. **Peters, J. S.**: Phenolic compound biosynthesis and sulfur metabolism in the seagrass *Thalassia testudinum*

- C20. **Harlan, N. P.**; Paynter, K. T.: Characterization of *Crassostrea virginica* and *C. ariakensis* metabolic rates and response to anoxic stress

## Examining Nutrient Enrichment Effects on Coastal Ecosystems through Comparative Ecological Approaches and Perspectives

- D1. **Ford, K. H.**: An assessment of the impact of anthropogenic changes on the marine resources of coastal lagoons, Rhode Island
- D2. **Stutes, J. P.**; Stutes, A. L.; Hunter, A.; Corcoran, A.; Cebrian, J.: Comparing community production dynamics between seagrass dominated benthos and bare sediment across an eutrophication gradient in NW Florida
- D3. **Cherry, J. S.**; Hagy, J. D.; Lehrter, J. C.; Murrell, M. C.; Greene, R. M.: Nitrogen and phosphorus input, fate and net biogeochemical transformations in Pensacola Bay, FL
- D4. **Rego, S.**; Latimer, J.; Cicchetti, G.; Pesch, C.; Dettmann, E.: Development of a preliminary nitrogen load-response model for eelgrass using aerial imagery in southern New England embayments
- D5. **Pesch, C. E.**; McGovern, D. G.; Rego, S.; Cicchetti, G.; Latimer, J. S.: Proposed use of length along the shoreline of eelgrass beds as a measure of eelgrass extent in southern New England embayments
- D6. **Aftanas, F.**; Smith, K.; Caffrey, J. M.: Comparing porewater nutrients and sediment characteristics in three estuaries: Weeks Bay, AL; Pensacola Bay, FL; and the Duplin River, GA

- D7. **Ferdie, M.**; Erban, L.; McGlathery, K. J.; Zieman, J. C.: Spatial variability of leaf nutrient content (CNP) and isotope ratios ( $^{13}\text{C}$ ,  $^{15}\text{N}$ ) for seven seagrass species on Inhaca Island, Mozambique
- D8. **Miller, E. E.**; Jones, R. M.; Warren, R. S.; Shields, E. C.: Experimental nutrient enrichment of a northern MA salt marsh: vegetation mapping and plant communities of treatment and control creeksheds
- D9. **Keith, D.**; Latimer, J.; Dettmann, E.; Rego, S.; Bergen, B.; Nelson, W.; McKinney, R.; Charpentier, M.: Development of a preliminary nitrogen load -response model for chlorophyll *a* using airplane-derived remote sensing in southern New England embayments
- D10. **Henry, K. M.**; Dettmann, E. H.; Mason, L. B.; Erhunse, A.: Relationships between total nitrogen and planktonic chlorophyll *a* concentrations in estuaries and bays
- D11. **Dewsbury, B. M.**; Fourqurean, J. W.: Artificial structures as fish habitats in an oligotrophic estuary
- D12. **Parker, A. E.**; Hogue, V. E.; Wilkerson, F.; Dugdale, R. C.: Anthropogenic ammonium as a control on estuarine primary production
- D13. **DeYoe, H. R.**; Dundar, O.: Use of the macroalgae *Laurencia poiteauii* as an indicator of nutrient enrichment in a Texas subtropical lagoon

### **Ecological Indicators of Estuarine Change and Condition**

- D14. **Johnson, R. L.**; Cardin, J. A.; Perez, K. T.; Davey, E. W.; Rocha, K. J.: Detecting benthic community differences: the influences of statistical metric and season
- D15. **Na, G. H.**: The effects of embankment of estuaries for shellfish aquaculture
- D16. **White, S.**; Alber, M.: The response of *Spartina* species to prolonged drought in the Altamaha River Estuary, Georgia
- D17. **Brennan, P.**; Wigand, C.: In-situ soil respiration rates in six Narragansett Bay coastal salt marshes with varying watershed land development
- D18. **Oravitz, S. F.**; Wielenga, M. H.; Bodolus, D. A.; Jewett-Smith, J.: Temporal sestonic diatom abundance and biodiversity in Chincoteague Bay, VA
- D19. **Wolowicz, M.**; Sokolowski, A.; Lasota, R.: The effects of environmental changes on the biology, ecology and physiology of estuarine bivalves; the Gulf of Gdansk (southern Baltic Sea) – case study

- D20. **Metcalfe, W. J.**; Schaffner, L. C.: Factors controlling the abundance and distribution of meiofauna in high mesohaline Chesapeake Bay
- E20. **Green, L. R.**; Sathkumara, D.: Abundance and persistence of the macroalga *Enteromorpha* on restored and natural mudflats in southern California
- E1. **Chainho, P.**; Costa , J. L.; Chaves , M. L.; Costa, M. J.; Dauer , D. M.: Comparison of the classifications obtained by using two different approaches to assess the ecological quality in a poikilohaline environment

### **Estuarine Science at Primarily Undergraduate Institutions: Opportunities for Teaching and Research**

- E2. **Jones, M. B.**; Willett, S.: Next generation scientists, next opportunities: EPA's Science To Achieve Results (STAR) Program
- E3. **Foreman, K. H.**; Giblin, A. E.; Hopkinson, C. S.: Student collected long-term data sets on N-loading in West Falmouth Harbor MA: contributions to science and management
- E4. **Sauls, A.**; Ott, J.; Denault, T.: Student estuarine habitat mapping and GIS studies

### **Interactions through Estuarine Hydrology**

- E5. **Kelly, S. P.**; Rudnick, D. T.; Bennett, R.; McDonald, A. A.: Fate of Everglades dissolved organic matter in Florida Bay
- E6. **Habib, E.**; Rivera-Monroy,V.; Nuttle, B.; Wang, J.; Justic, D.; Visser, J.; Twilley, R.: Uncertainty analysis of conceptual box models for the Barataria Basin in coastal Louisiana
- E7. **Dusterhoff, S.**; Wiberg, P.; Alberston, J.; Blum, L.: On the interaction between tidal forcing, soil moisture, and vegetation dynamics within a marsh-upland transition: implications for ecosystem development
- E8. **Lane, R. A.**; Valle-Levinson, A.: Salt fluxes at the Chesapeake Bay entrance

### **Estuarine Sediment Dynamics and Morphodynamics**

- E9. **Harris, C. K.**; Rinehimer, J. P.: Chesapeake Bay bottom boundary layer: roughness and shear stress
- E10. **Smith, S. J.**; Friedrichs, C. T.: Estimating horizontal and vertical sediment fluxes in dredging plumes from ADCP data

- E11. **Huijts, K. M.**; Miley, A. C.; de Swart, H. E.; Schuttelaars, H. M.: Transversal structure of flow, suspended sediment concentration and mud pools in well-mixed estuaries with arbitrary bathymetry
- E12. **Wijekoon, N.**; Ortiz, J. D.; Munro-Stasiuk, M. J.: Satellite remote sensing monitoring program for suspended sediment load at Old Woman Creek Estuarine Reserve, Ohio
- E13. **Olivola, D. L.**; Croft, A. L.; Leonard, L.: Short-term sediment deposition rates in riparian marshes and swamps along the Lower Cape Fear River
- E14. **Wu, J.**; Shenk, G. W.; Linker, L. C.: Sediment simulation of Chesapeake Bay watershed
- E15. **Sommerfield, C. K.**; Walsh, D. R.: Historical morphological change in the Delaware River estuary
- E16. **Dickhudt, P. J.**; Friedrichs, C. T.; Kuehl, S. A.; Sanford, L. P.: Temporal and spatial variability of seabed properties related to erodability of muddy bed sediment in the York River estuary, Virginia, USA
- E17. **Woo, H. J.**; Koo, B. J.; Lie, H. J.: Changes of sedimentary environments in the Saemangeum tidal flat on the west coast of Korea
- E18. **Tiling, G.**; Smith III, T. J.: Disturbance, sea-level rise and peat collapse: are we losing Cape Sable, an integral portion of the coastal Everglades?
- E19. **Willis, P. L.**; Blum, L. K.; Wiberg, P. L.: Effect of hydroperiod and precipitation on surface elevation and sediment accumulation in Phillips Creek Salt Marsh, Virginia, USA

# Oral Sessions - Wednesday

## CPS-01: Ecosystems and Trophic Dynamics

- Chair(s): Terry West, Mike Sullivan, Elizabeth Canuel, Joe Boyer
- Location: M3
- 8:00 AM **Baustian, M. M.**; Rabalais, N. N.; Craig, J. K.: Prey availability for demersal predators in relation to hypoxia in the Northern Gulf of Mexico
- 8:15 AM **Condon, E. D.**; Arnold, G. L.; Luckenbach, M. W.: Estimated impacts of aquacultured clams (*Mercenaria mercenaria*) on phytoplankton in Cherrystone Inlet, Virginia
- 8:30 AM **Booth, D. M.**; Heck, K. H.: The impacts of *Crassostrea virginica* on seagrass growth rate
- 8:45 AM **West, T. L.**; Corbett, D. R.; Clough, L. M.; Calfee, M. W.; Collins, J. B.: Effects of wind and trawling disturbance on sediment loading and water column primary production in a sub-estuary of North Carolina, USA
- 9:00 AM **Beseres, J. J.**; Feller, R. J.: Does shrimp predation affect spatial distribution of macrobenthos?
- 9:15 AM **Howe, E. R.**; Simenstad, C. A.: Estuarine food web dynamics of restored tidal wetlands in the San Francisco Estuary
- 9:30 AM **Galvan, K.**; Fleeger, J. W.; Fry, B.: What's for dinner on the mudflat tonight? The benthic food web of a tidal marsh creek in the Plum Island Estuary, Massachusetts
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- BREAK 9:45am - 10:15am
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- 10:15 AM **Herzka, S. Z.**; Talley, D. M.; Mellink, E.; Huxel, G.; Dayton, P. K.: Trophic structure of the food webs supporting birds nesting in the Delta of the Colorado River based on stable isotope ratio analysis
- 10:30 AM **Sullivan, M. J.**; Fry, B.; Sanderson, P. A.; Bucolo, A. P.: The trophic importance of sediment microalgae in seagrass beds
- 10:45 AM **Fulford, R. S.**; Breitburg, D. L.; Newell, R. I.; Luckenbach, M.: Assessing the ecological costs and benefits of oyster population recovery in Chesapeake Bay: management from a food-web perspective
- 11:00 AM **Wozniak, J. R.**; Anderson, W. T.; Childers, D. L.: Follow the bouncing  $^{15}\text{N}$  tracer: creating N-budgets for Southern Everglades marshes

- 11:15 AM **Harbeson, S. H.**; Macko, S. A.; Orth, R. J.; van Montfrans, J.; Combs, D.; Canuel, E. A.: Trophic dynamics in restored seagrass beds using stable isotopes of carbon, nitrogen and sulfur
- 11:30 AM Poster Summaries
- 11:45 AM Poster Summaries
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- POSTER SESSION and LUNCH 12noon - 2pm
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- 2:00 PM **Ho, C. K.**; Pennings, S. C.: Consequences of omnivory for trophic interactions: a case from salt marshes
- 2:15 PM **Fox, D. A.**; Jones, K. M.; Able, K. W.: Dietary analysis of piscivorous predators in marsh creeks throughout Delaware Bay, New Jersey
- 2:30 PM **Spivak, A. C.**; Canuel, E. A.; Duffy, J. E.; Richardson, J. P.: Linking community structure to carbon cycling: evidence of cascading effects in an experimental seagrass system
- 2:45 PM **Tuxbury, S. M.**; Denault, M.; Riccio, R.; Norden, W.; Cobb, S.: Use of benthic fauna to characterize *Zostera marina* transplant bed maturity
- 3:00 PM **Canuel, E. A.**; Spivak, A. C.; Waterson, E. J.; Duffy, J. E.: Interactions between benthic community structure and the accumulation of microalgal biomass in an experimental seagrass system: biomarker insights
- 3:15 PM **Smith, K. L.**; Pringle, C. M.: Importance of riverine energy sources in Puerto Rican estuaries
- 3:30 PM **Abu Hena, M. k.**; Haque, M. N.: Coastal estuarine resources of Bangladesh
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- BREAK 3:45pm - 4:15pm
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- 4:15 PM **Lehman, P. W.**; Sommer, T. R.; Rivard, L.: The relative contribution of floodplain and riverine habitat to estuarine primary productivity in San Francisco Estuary
- 4:30 PM **Juszli, G. M.**; Childers, D. L.: Belowground primary productivity patterns in an oligohaline ecotone of the Florida Everglades
- 4:45 PM **Wong, W. H.**; Nancy N. Rabalais, ; R. Eugene Turner, : Control of phytoplankton growth by grazers in eutrophic waters
- 5:00 PM **Hopkinson, C. S.**; Smith, E. M.: Estuarine respiration: an overview of benthic, pelagic and whole system respiration

WEDNESDAY

5:15 PM	<b>Gifford, S. M.</b> ; Rollwagen Bollens, G.; Slaughter, A. M.; Bollens, S. M.: Mesozooplankton predation on protists in Suisun Bay (Northern San Francisco Estuary)
5:30 PM	<b>Kolesar, S. E.</b> ; Breitburg, D. L.: Effect of low dissolved oxygen on swimming speeds, encounter rate and predation by <i>Mnemiopsis leidyi</i> ctenophores on naked goby larvae
5:45 PM	<b>Johnson, V. L.</b> ; Mallin, M. A.; Cahoon, L. B.: Primary productivity by phytoplankton in two North Carolina tidal creeks
<b>CPS-02: Population and Community Dynamics</b>	
Chair(s):	John Fleeger, Troy Alphin, Nancy Rabalais, Tracy Buck
Location:	M4
8:00 AM	<b>Grove, M. W.</b> ; McCraith, B.: Invasive grass species effects on fiddler crab population density and bioturbation
8:15 AM	<b>Crain, C. M.</b> ; Bertness, M. D.: Environmental stress and engineering impacts: lessons from hummocking plants in estuarine marshes
8:30 AM	<b>Schile, L. M.</b> ; Vasey, M.; Callaway, J.; Parker, V. T.: Non-destructive methods for estimating productivity of dominant vegetation in tidal marshes of San Francisco Bay, California
8:45 AM	<b>Proffitt, C. E.</b> ; Travis, S. E.; Edwards, K. R.; Chiasson, R. S.: Ecology and genetics of species interactions in salt marsh restoration
9:00 AM	<b>Zahn, E. F.</b> ; Wijte, A.: Invasive capabilities and population distribution of exotic ice plant in southern California salt marshes
9:15 AM	<b>Apodaca, A. M.</b> ; Wijte, A.: Four and seven year plant cover and diversity development in constructed salt marshes in Long Beach, CA, as compared to both a natural and a degraded marsh
9:30 AM	<b>Traut, B. H.</b> ; Templer, P. H.: Short-term nitrogen uptake by invasive vs. native plants in a northern California salt marsh
<hr/> BREAK 9:45am – 10:15am <hr/>	
10:15 AM	<b>Chintala, M. M.</b> ; Wigand, C.; Thursby, G. B.: Ribbed mussel ( <i>Geukensia demissa</i> ) populations in Rhode Island salt marshes subject to varying nitrogen loads

10:30 AM	<b>Johnson, D. S.</b> ; Fleeger, J. W.; Galvan, K. A.: Is your top-down or bottom-up? The effect of whole-creek nutrient additions and predator exclusions on the benthic macrofauna in a Massachusetts salt marsh
10:45 AM	<b>Johnson, J. M.</b> ; Deegan, L.: Whole creek manipulations of nutrients and species composition alter nekton production in a New England high marsh ecosystem
11:00 AM	<b>Maier Brown, A. F.</b> ; Dortch, Q.; Rabalais, N. N.: A multivariate analysis of the phytoplankton community from the Louisiana Shelf over the past decade
11:15 AM	<b>Atilla, N.</b> ; Rabalais, N. N.; Dortch, Q. F.; Mendenhall, W. A.; Thessen, A. E.; Turner, R. E.: Phytoplankton communities in the Barataria estuary (Louisiana, USA) reflect gradients of nutrients and salinity
11:30 AM	<b>Sheehan, E. V.</b> ; Attrill, M. J.; Thompson, R. C.; Coleman, R. A.: Green crab fishery - impacts on crab populations and estuarine communities
11:45 AM	<b>Bologna, P. A.</b> : Seagrass loss, recovery and restoration in New Jersey, USA
<hr/> POSTER SESSION and LUNCH 12noon - 2pm <hr/>	
2:00 PM	<b>Wisehart, L. M.</b> ; Hacker, S. D.; Dumbauld, B. R.; Ruesink, J. L.: Does oyster aquaculture influence eelgrass recruitment?
2:15 PM	<b>Campbell, J. J.</b> ; Moore, K. A.: Sexual reproduction of wild celery ( <i>Vallisneria americana</i> ): why it's worth the effort
2:30 PM	<b>Landry, J. B.</b> ; Durako, M. J.: Spatial and temporal dynamics of Florida Bay macroalgae: 1995–2004
2:45 PM	<b>Cibic, T.</b> ; Blasutto, O.; Fonda Umani, S.: Microphytobenthic primary production and biomass estimation in a coastal area of the Gulf of Trieste (Northern Adriatic Sea)
3:00 PM	<b>Alphin, T. D.</b> ; Posey, M. H.: Effects of drought on estuarine infaunal and nekton communities
3:15 PM	<b>Dobberfuhl, D. R.</b> : Invertebrate patterns and associations with submerged aquatic vegetation in the lower St. Johns River, Florida
3:30 PM	<b>Buck, T. L.</b> ; Allen, D. M.; Smith, E.; Renkas, B.; Foose, S.: Climatic and biotic factors affecting long-term changes in zooplankton assemblages in a Southeastern US estuary
<hr/> BREAK 3:45pm – 4:15pm <hr/>	

4:15 PM	<b>Peterson, H. A.</b> ; Vayssières, M.: Characteristics and consequences of long-term changes in the benthic assemblages of the upper San Francisco Estuary
4:30 PM	<b>Longval, B. A.</b> ; Berman, M.; Sullivan, B.; Oviatt, C. A.: Resolving optical plankton counter data to estimate zooplankton abundance and distribution in Narragansett Bay, Rhode Island
4:45 PM	<b>Richmond, C. E.</b> ; Marcus, N. H.; Sedlacek, C.; Miller, G. A.; Oppert, C.: Hypoxia and temperature: impacts on the population dynamics of the planktonic copepod <i>Acartia tonsa</i>
5:00 PM	<b>Paperno, R.</b> ; Tremain, D. M.; Adams, D. H.; Sebastian, A. P.; Sauer, J. T.; Friskel, P. C.; Moore, J. K.; Gianelli, J. D.: Examination of the effects of the 2004 season of hurricanes on fish communities in the Indian River Lagoon, Florida
5:15 PM	Open
5:30 PM	<b>Bustamante, H. E.</b> ; Schneider, D. W.; Padilla, D. K.; Rehmann, C.: Population dynamics of the zebra mussel ( <i>Dreissena polymorpha</i> ) in the Hudson River: recruitment and post-recruitment processes
5:45 PM	<b>Moody, R. M.</b> : The costs of predator-induced defenses and synergistic controls of periwinkle abundance in <i>Spartina alterniflora</i> salt marshes

### CPS-07: Habitat and Habitat Selection

Chair(s):	Lori Morris, Lawrence Rozas
Location:	M1
8:00 AM	<b>Crona, B. I.</b> ; Rönnbäck, P.: Community structure and temporal variability of juvenile fish assemblages in natural and replanted mangroves, <i>Sonneratia alba</i> Sm., of Gazi Bay, Kenya
8:15 AM	<b>MacDonald, J. A.</b> ; Weis, J. S.: Subtidal animal communities in <i>R. mangle</i> prop roots: what impact does nearby anthropogenic disturbance have on community composition and diversity?
8:30 AM	<b>Gossman, B. P.</b> ; La Peyre, M. K.; Nyman, J. A.: Nekton use of terraced and unterraced marsh habitats in coastal Louisiana
8:45 AM	<b>Hagan, S. M.</b> ; Able, K. W.; Brown, S. A.: Invasion and removal of <i>Phragmites</i> influences growth and production of mummichog, <i>Fundulus heteroclitus</i>
9:00 AM	<b>Zeug, S. C.</b> ; Hoeinghaus, D. J.; Shervette, V. R.; Davis, S. E.: Functional equivalence of created marsh habitat in the Aransas National Wildlife Refuge, Texas

9:15 AM	<b>Krinsky, L. S.</b> ; Epifanio, C. E.: Effects of chemical cues on metamorphosis of the Florida stone crab, <i>Menippe mercenaria</i> (Say)
9:30 AM	<b>Long, W. C.</b> ; Burke, R. P.: Habitat size of salt water marshes: effects on the flora and fauna in the York River, Chesapeake Bay
BREAK 9:45am - 10:15am	
10:15 AM	<b>Bretsch, K. P.</b> : Depth-regulated partitioning of salt marsh intertidal creeks by fishes and shrimps
10:30 AM	<b>Robbins, B. D.</b> ; Adams, A. J.: Seagrass polygon categorization: can management units at the landscape scale be supported empirically?
10:45 AM	<b>Rozas, L. P.</b> ; Minello, T. J.: Nekton use of <i>Vallisneria americana</i> (wild celery) beds in the Barataria Bay, Louisiana
11:00 AM	<b>Holsman, K. K.</b> ; McDonald, P. S.; Armstrong, D. A.: Patterns of intertidal migration and habitat use by subadult Dungeness crab ( <i>Cancer magister</i> ) in a coastal estuary of the northeastern Pacific
11:15 AM	<b>Florida, R.</b> ; Sánchez, A. J.: Habitat complexity and prey mobility effect on predation by the blue crab <i>Callinectes sapidus</i>
11:30 AM	<b>Morris, L. J.</b> ; Miller, J. D.; Virnstein, R. W.: Hurricanes – all bad news for seagrass?
11:45 AM	<b>Perry, M. C.</b> ; Kidwell, D. M.; Wells, A. M.; Lohnes, E. J.; Forsell, D.: Comparison of the distribution of black and surf scoters along a marine/estuarine gradient on the Atlantic coast

WEDNESDAY

### CPS-08: Biogeochemistry (Organic and Inorganic)

Chair(s):	Todd Kana, Rachel Michaels
Location:	M6
4:15 PM	<b>Harrison, J. A.</b> ; Caraco, N. F.; Seitzinger, S. P.: Global patterns and sources of dissolved organic matter export to the coastal zone: results from a spatially explicit, global model
4:30 PM	<b>Flewelling, S. A.</b> ; Gu, C.; Battistelli, J. M.; Herman, J. S.; Hornberger, G. M.; Mills, A. L.: Denitrification in stream banks and sediments serves as a major nitrate filter in low-relief coastal streams
4:45 PM	<b>Smith, E. M.</b> ; Benner, R.: Photochemical transformations of riverine dissolved organic matter: effects on estuarine bacterial metabolism and nutrient demand
5:00 PM	<b>Anderson, J. T.</b> ; Boynton, W. R.; Jordan, T. E.; Cornwell, J. C.: Phosphorus fluxes and transport in the middle Patuxent estuary, Maryland
5:15 PM	<b>Megonigal, J. P.</b> ; Wolf, A. A.; Drake, B. G.: Elevated atmospheric carbon dioxide stimulates decomposition of soil organic matter in a brackish marsh

- 5:30 PM **Condon, R. H.**; Steinberg, D. K.: Effects of ctenophores on dissolved organic matter cycling in the York River estuary, Virginia, USA
- 5:45 PM **Luscher, A. E.**: The role of benthic microalgae in tidal marsh accumulation of reactive silicate

**CPS-09: Nutrients**

- Chair(s): Eugene Turner, Scott Neubauer  
Location: M6
- 10:15 AM **Pauslon, A. J.**; Konrad, C.; Frans, L.; Huffman, R.; Olsen, T.; Noble, M.: Inputs of nitrogen compounds to Hood Canal, Washington
- 10:30 AM **Jordan, T. E.**; Cornwell, J. C.; Anderson, J. T.; Boynton, W. R.: Do sea salts or sulfate mobilize iron-bound phosphate from estuarine sediments?
- 10:45 AM **Darby, F. A.**; Turner, R. E.: Belowground biomass of *Spartina alterniflora*: I. Seasonal variability and response to nutrients
- 11:00 AM **Turner, R. E.**; Darby, F. A.: Belowground biomass of *Spartina alterniflora*: 2. Geographic variability and eutrophication
- 11:15 AM **Mulholland, M. R.**; Watson, A. M.; Bernhardt, P. W.; Lee, C.: Uptake of peptide hydrolysis products in marine and estuarine systems
- 11:30 AM **Williams, M. R.**; Fisher, T. R.; Cerco, C. F.; Boynton, W. R.; Kemp, M. W.; Eshleman, K. N.; Hood, R. R.; Kim, S. C.; Greene, S. E.; Radcliffe, G.: Effects of tidal marshes on the biogeochemistry of low-salinity estuarine regions: inferences from numerical modeling
- 11:45 AM Poster Summaries

## POSTER SESSION and LUNCH 12noon - 2pm

- 2:00 PM **Neubauer, S. C.**; Anderson, I. C.: Nitrogen cycling in tidal marshes: importance of estuarine inputs versus internal recycling
- 2:15 PM **Hyfield, E. C.**; Day, J. W.; Lane, R. R.; Day, J. N.: The spatial and temporal distribution of nutrients through an estuary receiving Mississippi River re-introduction
- 2:30 PM **Holm, G. O.**; Sasser, C. E.: The effect of nutrient-enrichment on belowground accumulation rates in peat-based wetlands of coastal Louisiana
- 2:45 PM **Jaworski, N. A.**; Bill Romano; Claire Buchanan: Nitrogen control options for improving hypoxic conditions in the Lower Potomac Estuary
- 3:00 PM **Yarbro, L. A.**; Carlson, P. R.; Ketron, A.; Saindon, D. D.; Arnold, H. A.; Greening, H.: Benthic fluxes of oxygen and nutrients in Tampa Bay, Florida, USA

- 3:15 PM **Schaefer, S. C.**; Alber, M.: Comparison of net anthropogenic nitrogen inputs and riverine export in estuarine watersheds of Georgia
- 3:30 PM **Johansson, J. O.**; Avery, W. M.: Twenty years with improved water quality in Hillsborough Bay (Tampa Bay): has seagrass recovery been achieved?

**CPS-13: Impacts of Climate Variability**

- Chair(s): Carlos Duarte, Irving Mendelsohn  
Location: Providence (S2)
- 4:15 PM **Solidoro, C.**; Pastres , R.; Cossarini, G.; Melaku Canu, D.: Effects of climate, tidal flushing and seasonality of irradiance on spatial, seasonal and interannual variability of water quality parameters in coastal area
- 4:30 PM **Diaz-Almela, E.**; Duarte, C. M.; Álvarez, E.; Santiago, R.; Martínez, R.; Terrados, J.; , G. E.: Inter-annual variability of the seagrass *Posidonia oceanica* population dynamics: high mortality and intense flowering in response to climatic forcing
- 4:45 PM **Mendelsohn, I. A.**: Sudden salt marsh dieback in the northern Gulf of Mexico: an update on causation
- 5:00 PM **Purcell, K. P.**; Leberg, P. L.: Salinity resistance in coastal marsh fish populations
- 5:15 PM **Hill, V. J.**: Importance of terrestrially derived dissolved carbon as a heating mechanism in surface waters of the coastal Arctic Ocean
- 5:30 PM **Calabretta, C. J.**; Oviatt, C. A.: Benthic macrofauna in Narragansett Bay, RI: the relationship between winter/spring phytoplankton bloom dynamics and benthic infaunal abundance and diversity
- 5:45 PM Poster Summaries

**CPS-20: Scientist - Community Group Interactions in Restoration Efforts for Estuaries and their Watersheds**

- Chair(s): Holly Greening, David Nemerson  
Location: M6
- 8:00 AM **Sorabella, L. C.**; Frankenfield, J. B.: Inspiring a community to participate in restoring a river's water quality: a case example from the Lynnhaven River (Virginia Beach, VA)
- 8:15 AM **Woithe, R. D.**; Wade, D. L.; McConnell, R. G.; Janicki, A. J.; Robison, D. E.; Maki, K. L.: Effects of desalination facility operation on salinity and benthos in Tampa Bay
- 8:30 AM **Ertel, P. B.**; McCall, A. J.; DeBlieu, J. S.: The Nature Conservancy's Oyster Reef Habitat Restoration in Pamlico Sound, North Carolina

8:45 AM	<b>Nemerson, D. M.</b> : Innovative use of GIS to present and analyze high-resolution, volunteer-collected monitoring data of wetlands created from dredged material in Chesapeake Bay
9:00 AM	<b>Weishar, L. L.</b> ; Teal, J. M.; Hinkle, R.; Strait, K.; Evans, B.: Embracing change in the wetlands restoration process without compromising restoration goals
9:15 AM	Open
9:30 AM	<b>Butzler, R. E.</b> ; Davis, S. E.: Spatial and temporal patterns of <i>Lycium carolinianum</i> in the estuarine marshes at Aransas National Wildlife Refuge (ANWR), TX

### SPS-09: Adapting and Transferring Science to Managers - Research, Case Studies and Connections

Chair(s):	Susan Lovelace, Denise Sanger
Location:	M2
2:00 PM	<b>Lovelace, S.</b> ; Wilson, K.; Edwards, B.: Differences in perceptions of issues between citizens and decision-makers and the role local environmental action groups may play as providers of information
2:15 PM	<b>Wilson, K. R.</b> ; Lovelace, S.: The influence of in-migration on perceptions of environmental issues in coastal counties
2:30 PM	<b>Feurt, C. B.</b> : Understanding barriers to science translation in coastal watershed management
2:45 PM	<b>Riley, C. A.</b> : Trends in training coastal decision-makers: the results of the National Estuarine Research Reserve System Coastal Training Program trends analysis
3:00 PM	<b>Pollack, J. A.</b> : A collaborative, iterative approach to stormwater and watershed education on the Grand Strand of South Carolina
3:15 PM	<b>VanPareren, S.</b> : Valuable stormwater training for builders and engineers requiring permits expressing the control of sediment run-off at construction sites
3:30 PM	<b>Farrow, D. G.</b> ; Culliton, T.; Wilson, R.: Building an integrated spatial framework for coastal and ocean ecosystem-based management: pipe dream or priority?

BREAK 3:45pm - 4:15pm

4:15 PM	Ramírez Toro, G. I.; <b>Minnigh, H. A.</b> ; Christian, R. R.; Brinson, M. M.: Laguna Cartagena - a failure to communicate: managing wetlands in the tropics
4:30 PM	<b>Sanger, D. M.</b> : Linkages between development and tidal creek environmental quality in South Carolina: science and management implications

4:45 PM	<b>Blake, A. C.</b> ; Jones, C. J.; White, P. J.; Curtis, S.; Chadwick, D. B.; Ahlersmeyer, R. N.: A sediment transport guide for contaminated sediment sites: Hunters Point Shipyard Demonstration
5:00 PM	<b>Scerno, D. H.</b> ; Apple, D. P.; Rogalski, M. B.; Skaggs, L. L.: A tale of two estuaries: the importance of telling the whole story
5:15 PM	<b>Chesnes, T. C.</b> ; Waldner, R. E.; Krahforst, C.: Changes in length of Florida food fishes stored on ice
5:30 PM	Poster Summaries

### SPS-15: Physical and Biological Factors Affecting Horseshoe Crab Abundance and Distribution in Coastal Waters

Chair(s):	Ruth Carmichael
Location:	M1
2:00 PM	<b>Shuster, C. N.</b> ; Botton, M. L.; Loveland, R. E.: A retrospective review of horseshoe crabs in the Delaware Bay area
2:15 PM	<b>Pooler, P. S.</b> ; Smith, D. R.; Smith, E. P.: Characterizing horseshoe crab ( <i>Limulus polyphemus</i> ) spawning habitat in the Delaware Bay using Bayesian finite mixture models
2:30 PM	<b>Chatterji, A. K.</b> : Nesting behaviour of the Indian horseshoe crab, <i>Tachypleus gigas</i> (Müller) (Xiphosura)
2:45 PM	<b>Smith, D. R.</b> ; Brousseau, L. J.; Millard, M. J.: Age and sex-specific spawning behavior and migration of horseshoe crabs ( <i>Limulus polyphemus</i> ) in Delaware Bay
3:00 PM	<b>Leschen, A. S.</b> ; Grady, S. G.; Valiela, I.: Fecundity and spawning of the Atlantic horseshoe crab, <i>Limulus polyphemus</i> , in Pleasant Bay, Cape Cod, Massachusetts
3:15 PM	<b>Brockmann, H. J.</b> : A long-term study of spawning activity in a Gulf coast population of horseshoe crabs
3:30 PM	<b>Jackson, N. L.</b> ; Smith, D. R.; Nordstrom, K. F.: Sediment moisture in the foreshore of an estuarine beach - implications for horseshoe crab egg viability and development

BREAK 3:45pm - 4:15pm

4:15 PM	<b>Ehlinger, G. S.</b> ; Tankersley, R. A.: Endogenous rhythms and entrainment cues of larval activity in the horseshoe crab, <i>Limulus polyphemus</i>
4:30 PM	<b>Botton, M. L.</b> : Keeping cool under fire: heat shock proteins and the response to temperature stress in horseshoe crab embryos and larvae
4:45 PM	Chabot, C. C.; Betournay, S. H.; Kent, J.;

	<b>Watson, III, W. H.</b> : Circadian and tidal rhythms of locomotion expressed in the laboratory by the horseshoe crab, <i>Limulus polyphemus</i>
5:00 PM	<b>Barlow, R. B.</b> ; Guo, M.; Dodge, F. A.: Circadian rhythms in the horseshoe crab
5:15 PM	<b>Schaller, S.</b> ; Thayer, P.; Hanson, S.: The Maine Horseshoe Crab ( <i>Limulus polyphemus</i> ) Surveys: four years of baseline data, population changes and environmental triggers
5:30 PM	<b>Sweka, J. A.</b> ; <b>Millard, M. J.</b> ; Smith, D. R.: Sensitivity analysis of an age-structured model to identify parameters critical to horseshoe crab population dynamics
5:45 PM	<b>Wakefield, K. F.</b> ; Targett, N. M.: Sustainable bait alternatives for regional fisheries: in search of the holy cue

### SPS-19: Innovative Techniques for Assessing Fish and Invertebrate Habitat Linkages in Estuaries and Coastal Systems

Chair(s):	Jason Toft, Greg Skilleter
Location:	M2
8:00 AM	<b>Skilleter, G. A.</b> ; Loneragan, N. R.; Zharkov, Y.; Fry, K.; Cameron, B.: Importance of fragmentation and spatial arrangement of estuarine habitats in determining their value to fish, crabs and prawns
8:15 AM	<b>Toft, J. D.</b> ; Simenstad, C. A.; Cordell, J. R.; Stamatou, L. A.; Morley, S. A.: Challenges in measuring habitat linkages in an urbanized landscape: case studies of fish use along estuarine shorelines of Seattle, WA
8:30 AM	<b>Seitz, R. D.</b> ; Lipcius, R. N.; Olmstead, N. H.; Seebo, M. S.; Lambert, D. B.: Indirect effects of habitat degradation upon shallow-water benthic organisms and predators in an interconnected landscape
8:45 AM	Beamer, E.; <b>Rice, C.</b> ; Greene, C.; Fresh, K.; Reisenbichler, R.; Larsen, K.; Rhodes, L.: Estuarine habitat use by juvenile wild and hatchery Chinook salmon in the Puget Sound region
9:00 AM	<b>Bilkovic, D. M.</b> ; Hershner, C. H.; Stanhope, D. M.; Angstadt, K. T.: Ecosystem approaches to aquatic condition assessment: linking subtidal habitat, shoreline condition and estuarine fish communities
9:15 AM	<b>McDonald, P. S.</b> ; Holsman, K. K.; Semmens, B. X.; Armstrong, D. A.: Evaluating the potential scope and impact of a novel predator within intertidal habitats of a northeastern Pacific estuary

WEDNESDAY

9:30 AM	<b>Turner, J. P.</b> ; O'Connell, M. T.: Retrospective determination of habitat use in juvenile pinfish ( <i>Lagodon rhomboides</i> ) using multi-tracers
BREAK 9:45am - 10:15am	
10:15 AM	<b>Leakey, C.</b> ; Attrill, M.; Jennings, S.: Quantifying inhabitation and feeding in estuaries by three commercially important marine fishes: stable isotope analysis and otolith chemistry
10:30 AM	<b>Gillett, D. J.</b> ; Schaffner, L. C.; Anderson, I. C.: Macrobenthic production and trophic transfer efficiency in disturbed and non-disturbed shallow estuarine habitat
10:45 AM	<b>Rodney, W. S.</b> ; Paynter, K. T.: Macrofauna assemblage structure and function on restored and unrestored eastern oyster reefs in Chesapeake Bay: implications for fish production
11:00 AM	<b>Minello, T. J.</b> ; Doerr, J. C.; Aldrich, D.V.: Laboratory gradients to examine salinity selection by estuarine nekton
11:15 AM	<b>Scott, L. C.</b> ; Diaz, R. J.; Allen, S. D.: Linkage between physical habitat characteristics as classified using a video sled camera and benthic macroinvertebrates
11:30 AM	<b>French, R.</b> ; van de Wetering, S. j.: The advent of low cost underwater videography has allowed for new fish migration observation methods in estuarine habitats
11:45 AM	<b>Wolfe, R. K.</b> ; Adams, A. J.: Efficacy of PIT tags and an autonomous antenna system for studying the juvenile life stage of an estuarine-dependent fish

### SPS-22: Estuaries and Ecological Forecasting: Are We Making Progress?

Chair(s):	Nathalie Valette-Silver, Gary Matlock, Jean Snider, Don Scavia
Location:	M5
8:00 AM	<b>Matlock, G. C.</b> ; Valette-Silver, N. J.; Snider, J.: The NOAA National Center for Coastal Ocean Sciences' Ecological Forecasting Portfolio
8:30 AM	<b>Scavia, D.</b> ; Whitall, D.: Gulf of Mexico hypoxia: hindcasts, forecasts, and scenarios
9:00 AM	<b>Carey, D. A.</b> ; Costa-Pierce, B. A.; Desbonnet, A.: State of science knowledge on nutrients in Narragansett Bay - process and synthesis
9:15 AM	<b>Sunda, W.</b> ; Hardison, D. R.: A conceptual model for ecosystem disruptive algal blooms: the interactive roles of eutrophication, algal toxicity and limitation by nutrients and light

9:30 AM	<b>Longstaff, B. J.</b> ; Dennison, W. C.; Jasinski, D. A.; Tango, P.; Orth, R. J.; Williams, M.; Shenk, G.; Batiuk, R.; Conner, C.: Forecasting summer ecological conditions in Chesapeake Bay: rationale, approach and lessons learned from the summer of 2005
BREAK 9:45am - 10:15am	
10:15 AM	<b>Zhang, X.</b> ; Wood, R. J.; Roman, M. R.: Effects of nutrient reduction efforts in Chesapeake Bay on plankton and benthic food-web structure and function: implication for Menhaden recruitment
10:30 AM	<b>Maness, S. J.</b> ; Donato, T. F.; Bowles, J. H.; Boyd, T. J.; Gillis, D. B.; Hamdan, L. J.; Lamela, G. M.; Osburn, C. L.; Rhea, W. J.; Walker, S. E.: Hyperspectral remote sensing applications for the characterization of aquatic ecosystems in the Chesapeake Bay
10:45 AM	<b>Ferguson, R. L.</b> ; Davenport, E. K.; Govoni, J. J.; Krouse, C. W.: A remote sensing approach to forecast ecological effects of hurricanes on coastal planktonic ecosystems
11:00 AM	<b>Bacher, C.</b> ; Plus, M.; Gangnery, A.; La Jeunesse, I.; Bouraoui, F.; Zaldivar, J. M.; Chapelle, A.; Lazure, P.: Ecosystem approach and modelling of shellfish production in Thau Lagoon (France)
11:15 AM	<b>Baptista, A. M.</b> ; Burla, M.; Casillas, E.; Bottom, D.; Simenstad, C.; Zhang, Y.; Chawla, A.: Forecasting habitat opportunity for juvenile salmon in the Columbia River estuary-plume-shelf ecosystem
11:30 AM	Poster Summaries

### SPS-31: Estuarine Exchange and Innovative Technology

Chair(s):	Chunyan Li, Bob Chant, Parker MacCready
Location:	Providence (S2)
8:00 AM	<b>Glenn, S. M.</b> ; Schofield, O.; Kohut, J.; Chant, R.: Response of the Hudson River plume to wind forcing
8:30 AM	<b>Chant, R. J.</b> ; glenn, S. M.; Schofield, O.: Wind forced and spring/neap variability in a buoyant river plume: observations from coastal observing systems
8:45 AM	<b>Reinfelder, J. R.</b> ; Wright, D.: Speciation and transport of mercury and other trace metals in the Hudson River buoyant plume
9:00 AM	<b>MacDonald, D. G.</b> : Estuarine exchange processes and turbulent mixing through a narrow estuarine channel
9:15 AM	<b>Li, C. Y.</b> : Exchange of water under the influence of residual eddies

9:30 AM	<b>Janzen, C. D.</b> ; Pettigrew, N. R.; Fisher, N. R.: Observing exchange processes between Casco Bay and the adjacent Gulf of Maine
BREAK 9:45am - 10:15am	
10:15 AM	<b>Fram, J. P.</b> ; Stacey, M. T.: Bathymetrically induced surface features and their relation to ocean-bay exchange
10:30 AM	<b>Sigleo, A. C.</b> ; Frick, W. E.; Mordy, C. W.; Stabeno, P.: Estimating oceanic nitrogen flux in a North Pacific estuary with EPA's Visual Plumes model
10:45 AM	<b>Zhou, M.</b> : Salt wedge, turbidity maximum, bioaccumulation and zooplankton aggregation in the Lower Hudson River Estuary
11:00 AM	<b>Scully, M. E.</b> ; Friedrichs, C. T.: The importance of asymmetries in turbulent mixing to residual circulation in partially-mixed estuaries
11:15 AM	<b>Reed, R. E.</b> ; Burkholder, J. M.; Dickey, D. A.; Kinder, C. A.; Brownie, C.: Variability in the water surface elevation of the Neuse Estuary, North Carolina resulting from local and non-local forcing
11:30 AM	<b>Chen, C.</b> : Some critical issues in estuarine modeling
11:45 AM	<b>Huang, H.</b> ; Chen, C.; Blanton, J.; Andrade, F.: A numerical study of water exchange process in two shallow tidal creeks of the Okatee River, South Carolina

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM	<b>Zhao, L.</b> ; Chen, C.; Rothschild, B.: Modeling study the effects of tides, river discharge and wind forcings on the circulation and water exchange in the Mt. Hope Bay and Narragansett Bay
2:15 PM	<b>Cutter, G. A.</b> ; Meseck, S. L.: Selenium biogeochemistry in San Francisco Bay: modeling and forecasts
2:30 PM	<b>Hearn, C. J.</b> ; Yates, K. K.; Petersen, O. S.: High spatial resolution grids and the ocean flushing of an estuary
2:45 PM	<b>Ellison, R. M.</b> ; Donovan, C. D.: New solid-state fluorescence sensor used to monitor photosynthetic parameters and algal biomass
3:00 PM	<b>Gibson, P. J.</b> ; Boyer, J. N.; Smith, N. P.: Nutrient mass flux through Long Key Channel, Florida Bay
3:15 PM	<b>Cartwright, G. M.</b> ; Friedrichs, C. T.; Sanford, L. P.: Temporal and spatial variability of size, density and fall velocity of muddy flocs and aggregates in the Chesapeake Bay, Potomac River and York River estuaries

- 3:30 PM **McAllister, K. K.**; Chant, R.: Transport and transformation of chromophoric dissolved organic matter (CDOM) and its role in primary production in a buoyant river plume

### **SPS-35: Extreme Sediment Biogeochemistry: Observational and Experimental Results from Hypereutrophic Ecosystems**

- Chair(s): Eva Bailey, Mike Owens  
 Location: M5
- 2:00 PM **Boynton, W. R.**; Bailey, E. M.; Cornwell, J. C.; Owens, M. S.: Characteristics of sediment-water nutrient exchanges in hypereutrophic estuarine ecosystems
- 2:15 PM **Viaroli, P.**; Bartoli, M.; Azzoni, R.; Giordani, G.; Nizzoli, D.; Marcomini, A.: Organic matter, sulphur and iron interactions in hypereutrophic Mediterranean lagoons: implications for ecosystem functioning and water quality
- 2:30 PM **Tucker, J.**; Giblin, A. E.; Kelsey, S. W.; Howes, B. L.; Hopkinson, C. S.: What a difference a decade makes: recovery from eutrophication in sediments of Boston Harbor, MA
- 2:45 PM **Owens, M. S.**; Cornwell, J. C.; Kiss, E.: Salinity and oxygen as controls on estuarine sediment nitrogen cycling
- 3:00 PM **Jones, R. C.**; Kelso, D. P.: Ambient water quality and phytoplankton responses to external and internal nutrient loading in the Gunston Cove area of the tidal freshwater Potomac River
- 3:15 PM **Fulweiler, R. W.**; Nixon, S. W.: Denitrification in organic rich coastal sediments under varying levels of hypoxia

### **SYM-01: Use of Observing Systems for Understanding, Monitoring and Predicting Harmful Algal Blooms and Hypoxia**

- Chair(s): Quay Dortch, David Scheurer, Kenric Osgood, Marc Suddleson, Sue Banahan  
 Location: York Hall (S4)
- 8:00 AM **Campbell, L.**; Guinasso, Jr., N. L.: Monitoring harmful algal blooms (HABs) in conjunction with the Texas Automated Buoy System (TABS) in the Gulf of Mexico
- 8:15 AM **Peterson, K. A.**; Brown, L. H.: FlowCAM Technology: digital imaging flow cytometry for coastal research and water monitoring
- 8:30 AM **Kirkpatrick, G. J.**; Millie, D. F.; Stumpf, R. P.; Wilhelm, S.; Lohrenz, S.; Moline, M. A.; Weisberg, R. H.; Schofield, O. M.: Applications of the optical phytoplankton discriminator as an *in situ* component of an ocean observing system for HAB detection and tracking

- 8:45 AM **Tomlinson, M. C.**; Wynne, T. T.; Stumpf, R. P.: Remote sensing techniques for phytoplankton bloom characterization along the southwest coast of Florida

- 9:00 AM **Greenfield, D. I.**; SCHOLIN, C.: Application of the Environmental Sample Processor (ESP) for remote detection of harmful algae and associated toxins
- 9:15 AM **Stumpf, R. P.**; Tomlinson, M. C.; Culver, M. E.; Vincent, M. S.; Soracco, M.: Developing operational systems in support of harmful algal blooms monitoring and forecasting
- 9:30 AM **Trice, T. M.**; Michael, B. D.; Tango, P. J.; Heyer, C. J.: Harmful algal bloom and water quality monitoring, assessment, and management in Maryland's Chesapeake and Coastal Bays

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BREAK 9:45am – 10:15am

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- 10:15 AM **Lewitus, A. J.**; Williams, P. R.; Reed, R. E.; Burkholder, J. M.: Enhancement of South Carolina's Harmful Algal Bloom Program by real-time remote monitoring
- 10:30 AM **Hall, S.**: Real time monitoring of plankton by networks of volunteers using field microscopes
- 10:45 AM **Foreman, M.**; Hickey, B.; Trainer, V.; Pena, A.; Cochlan, W.: ECOHAB Pacific Northwest: monitoring and modelling HABs along the outer Washington Coast
- 11:00 AM **McGillicuddy, D. J.**; Anderson, D. M.; He, R.; Lynch, D. R.; Manning, J. P.; Smith, K. W.; Stock, C. A.; Townsend, D. W.: Modeling blooms of *Alexandrium fundyense* in the Gulf of Maine: from climatology to forecasting
- 11:15 AM **Kamer, K.**; Nezlin, N.; Stein, E.: The relationship between intertidal macroalgae and hypoxia in Upper Newport Bay, a eutrophic southern California estuary
- 11:30 AM **Reynolds, K. C.**; Rabalais, N. R.; Turner, R. G.: Interaction of dissolved oxygen, chlorophyll biomass and physical conditions in the Barataria Bay estuary
- 11:45 AM **Rabalais, N. N.**; Turner, R. E.; Wiseman, Jr., W. J.; Stone, G. A.; Pride, L.; Gibson, B.: Observing system in the Gulf of Mexico documents hypoxia and physical and biological parameters

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POSTER SESSION and LUNCH 12noon – 2pm

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- 2:00 PM **Gallo, T. E.**; Paerl , H. W.; Ramus, J. S.; Knight , J. F.; Lunetta, R. S.; Buzzelli, C.: FerryMon: ferry-based assessment of estuarine water quality parameters controlling phytoplankton and HAB dynamics

2:15 PM	<b>Pride, L.</b> ; Rabalais, N.; Justic, D.; Stone, G.; Wiseman Jr., W. J.; Turner, E.: Hurricanes and hypoxia in the Gulf of Mexico
2:30 PM	<b>Bridgeman, T. B.</b> ; Schloesser, D. W.; Ciborowski, J. J.; Ruberg, S. A.; Thomas, M. A.: Hypoxia and benthic ecology in western Lake Erie
2:45 PM	<b>Newton, J. A.</b> ; Warner, M. J.; Hannafious, D. E.: Status and factors contributing to hypoxia in Hood Canal, WA, USA
3:00 PM	<b>Jasinski, D. A.</b> ; Shenk, G.; Perry, E.; Dennison, B.; Longstaff, B.: Forecasting hypoxia in the Chesapeake Bay
3:15 PM	<b>Culver, M. E.</b> ; Sellner, K. G.; Dortch, Q.: Observing systems for HABs and hypoxia: impacts for research and management

## SYM-02: Coastal Invasive Species: Impacts, Management and the Role of Modified Habitats

Chair(s):	Mark S. Peterson, Fred Dobbs, Roger Mann, Martin O'Connell, Aaron Adams, W. Todd Slack
Location:	Poplar Hall (S1)
8:00 AM	<b>Whitlatch, R. B.</b> : Interactive effects of climate change and land use patterns on the alteration of coastal marine systems by invasive species
8:30 AM	<b>Fofonoff, P. W.</b> ; Ruiz, G. M.; Carlton, J. T.; Lambert, G.; Hines, A. H.; Steves, B. P.: Which coastal habitats are most invaded? A database analysis for the coasts of North America
8:45 AM	<b>Brown, C. W.</b> : Investigating the invasion pathways of <i>Littorina saxatilis</i> into San Francisco Bay using mtDNA haplotype diversity
9:00 AM	<b>Adams, A. J.</b> ; Wolfe, R. K.: Do altered coastal habitats promote non-native fish invasions into estuaries?
9:15 AM	<b>Drake, L. A.</b> ; Doblin, M. A.; Dobbs, F. C.: Case study in Chesapeake Bay: invasion pathways for microorganisms via ships' ballast water, biofilms, and ballast-tank residuals
9:30 AM	<b>Dobbs, F. C.</b> : Can microorganisms be invasive and if so, what are their ecological impacts?

BREAK 9:45am - 10:15am

10:15 AM	<b>Stanton, L. E.</b> ; Mendelsohn, I. A.: The ecosystem effects of <i>Phragmites australis</i> , an invasive clonal plant in southwestern Louisiana
10:30 AM	<b>O'Connell, M. T.</b> : Freshwater invasive fishes in estuarine habitats
10:45 AM	<b>Slack, W. T.</b> ; Peterson, M. S.; Woodley, C. M.: Fish assemblage structure in coastal Mississippi waterways and the association of Nile tilapia ( <i>Oreochromis niloticus</i> )

11:00 AM	<b>Lorenz, O. T.</b> ; O'Connell, M. T.; Cashner, R. C.: Source-sink dynamics of the invasive species <i>Herichthys cyanoguttatus</i> : the role of abiotic factors
11:15 AM	<b>Hinkle, R. L.</b> ; Evans, B. Q.; Strait, K. A.; Teal, J.: A field assessment of alternative treatments for the control of <i>Phragmites australis</i> in tidal wetlands - the PSEG Test Area Program
11:30 AM	<b>Ruiz, G. M.</b> ; Fofonoff, P. W.; Steves, B.; Carlton, J. T.: Spread of nonindigenous marine species in North America: patterns and predictions
11:45 AM	Poster Summaries

POSTER SESSION and LUNCH 12noon - 2pm

2:00 PM	<b>Stepien, C. A.</b> : Genetic factors regulating ecological success of invasions: examples from the Great Lakes
2:15 PM	<b>Mann, R.</b> ; Harding, J. M.; Southworth, M.: Tracking progression of a marine invasion: seven years of observations of the marine gastropod <i>Rapana venosa</i> in the Chesapeake Bay, Virginia, USA
2:30 PM	<b>Bossenbroek, J. M.</b> ; Finoff, D. C.; Saphores, J. D.; Lodge, D. M.: Evaluating the 100th Meridian Initiative: what is it worth to keep zebra mussels out of the Columbia River?
2:45 PM	<b>Choi, K. H.</b> ; Kimmerer, W.; Marcal, D.: What does mating of zooplankton have to do with marine bioinvasions?
3:00 PM	<b>Dozier, H.</b> : Non-native invasive plant environmentalism among retail nursery customers in the Gulf Coast: awareness, concern and action
3:15 PM	<b>Carlton, J. T.</b> : When we change it they will come: predicting kaleidoscopic ocean transformations and 21st century invasions

## SYM-03: Examining Nutrient Enrichment Effects on Coastal Ecosystems through Comparative Ecological Approaches and Perspectives

Chair(s):	Jim Hagy, Giancarlo Cicchetti, Ruth Carmichael, Scott Nixon
Location:	Stratford (S3)
8:00 AM	<b>Cicchetti, G.</b> ; Latimer, J.; Coiro, L.; Nelson, W.; Bergen, B.; Rego, S.; Dettmann, E.; Abdelrhman, M.: Development of preliminary nitrogen load-response models for benthic habitat quality in southern New England embayments
8:15 AM	<b>Brawley, J. W.</b> ; Field, J. M.; Wisneski, C. L.; Libby, P. S.; Kurtz, J. C.; Magee, M.; Tervelt, L.: A scientific assessment of nutrient concentrations, loads, and biological response in the northern Gulf of Mexico

- 8:30 AM **Russell, M. J.**; Montagna, P. A.: Integrated biological/hydrological net ecosystem metabolism model: ecosystem function under various watershed development and climate change scenarios
- 8:45 AM **Libby, P. S.**; Mickelson, M. J.: Revisiting a mass balance approach – bounding the impact due to transfer of the MWRA outfall from Boston Harbor to Massachusetts Bay: predictions vs. reality

- 9:00 AM **Oviatt, C. A.**: Tertiary treatment will reduce nutrient concentrations and productivity at several trophic levels in Narragansett Bay
- 9:15 AM **Philippart, C. J.**; Beukema, J. J.; Cadée, G. C.; Dekker, R.; Goedhart, P. W.; van Iperen, J. M.; Leopold, M. F.; Herman, P. M.: Impact of nutrient reduction on coastal food chains

### SYNTHESIS SESSION 3

#### Interactions with Management of Estuarine Systems

Location: Poplar Hall (S1)  
Time: 4:15–6:00 PM

### SYNTHESIS SESSION 4

#### Interactions with Estuarine Biology

Location: Stratford (S3)  
Time: 4:15–6:00 PM

### SYNTHESIS SESSION 5

#### Interactions with Observing Systems

Location: M5  
Time: 4:15–6:00 PM

# Mid-Day Poster Session - Wednesday

Poster presenters should be available to answer questions during the lunch hours.

Lunch will be provided in the poster hall.

The letter and number represents the poster position within the hall;  
see page 110 for a map of the poster hall positions.

Each poster will be available for viewing for one full day: 9:00 AM – 6:00 PM.

## 12:00 PM – 2:00 PM · Hampton Roads Ballroom (Marriott)

### Population and Community Dynamics

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|-------|--|------|--|
| A1.   | <b>Mohrman, T. J.</b> ; Qualls, C. P.: Initial effects of hurricanes on the herpetofauna of the Florida Gulf islands   | A11. | <b>Irlandi, E. A.</b> ; Sloan, N.; Goodfriend, E.: Pre- and post-hurricane assemblages of benthic infauna and sediment characteristics in tributaries of the Indian River Lagoon, FL                           |
| A2.   | <b>Jose Arreola, J. A.</b> : Ecological patterns of the crabs and shrimps in arid subtropical coastal lagoons from the Northwest, Mexico   | A12. | <b>Orlando, B. A.</b> ; Doering, P.; Crean, D.; Hunt, M.: Estero Bay Florida: from mud to mollusk  |
| A3.   | <b>Durand, J. R.</b> ; Kimmerer, W. J.: Determinants of seasonal abundance in key zooplankton of the San Francisco Estuary   | A13. | <b>Molina-Ramírez, A.</b> ; Hernández Arana , H. A.: Colonization, composition and spatial variation in the subtidal macrobenthic infauna community of Chetumal Bay, SE Mexico: an experimental approach       |
| A4.   | <b>Chen, M. E.</b> ; Norton, S. F.: Chemical defense in the gammarid amphipods <i>Chromopleustes oculatus</i> , <i>Ch. lineatus</i> , and <i>Cryptodus kelleri</i> (Arthropoda: Crustacea) | A14. | <b>Burrell, R. B.</b> ; Breitburg, D. L.; Kolesar, S. E.: Opposing waves of ctenophore and sea nettle population spread: a landscape perspective on gelatinous zooplankton dynamics                            |
| A5.   | <b>MacKenzie, R. A.</b> ; Cormier, N.: Impacts of Typhoon Sudal on nearshore nekton communities of Yap, Federated States of Micronesia   | A15. | <b>Wells, S. L.</b> ; McConaughay, J. R.: Blue crab reproduction: changes in age and size at maturity and size fecundity relationships in a reduced population   |
| A6.   | <b>Devlin, D. J.</b> : Predation by an obligate parasitic beetle affects <i>Rhizophora mangle</i> distribution   | A16. | <b>Petersen, K. C.</b> ; Pickerell, C.: Initial observations of the flat-clawed hermit crab, <i>Pagurus pollicaris</i> , as a seed predator of <i>Zostera marina</i> : implications for seed-based restoration |
| A7.   | <b>Wood, R. C.</b> : Long-term observations on the ecology and behavior of the mangrove terrapin ( <i>Malaclemys terrapin rhizophorarum</i> ) in the southern Florida Keys                 | A17. | <b>Graham, E.</b> ; Tuzzolino, D.; Burrell, R. B.; Breitburg, D. L.: Spatial and temporal patterns of ctenophore abundance and reproduction in the Rhode River   |
| A8.   | <b>Ketron, A.</b> ; Carlson, P.; Hayes, K.: Sexual reproduction of <i>Thalassia testudinum</i> in the Florida Big Bend   | A18. | <b>Boudreaux, M. L.</b> ; Walters, L. J.: Competition between oysters and barnacles: the impact of native and invasive barnacle density on native oyster settlement, growth, and survivorship                  |
| A9.   | <b>Griffith, K. A.</b> : Understanding a patchy parasite: distribution and abundance of salt marsh dodder ( <i>Cuscuta salina</i> )  | A19. | <b>Bulthuis, D. A.</b> ; Shull, S.: Distribution of eelgrasses and macro-algae in Padilla Bay, Washington in 1989, 2000, and 2004  |
| A10.  | <b>Floyd, A. L.</b> ; Blum, L. K.: Effects of tidal inundation regime and plant type on sediment bacterial community structure in an Eastern Shore, VA salt marsh                          | A20. | Palefsky, W. H.; <b>Franklin, C. I.</b> : Genetic transformation of <i>Spartina alterniflora</i>   |
| A10B. | <b>Casciano, G. M.</b> ; Blum, L. K.: An investigation of plant and location effects on sediment microbial communities in a Virginia salt marsh  | B1.  | <b>Vayssières, M. P.</b> ; Peterson, H. A.: Long term changes in the distribution of benthic species along environmental gradients in the upper San Francisco Estuary  |

- B20. **Marshallonis, D.**; Pinckney, J. L.: Regulation of estuarine plankton community carbon flows by gelatinous zooplankton

### **Estuaries and Ecological Forecasting: Are We Making Progress?**

- B2. **Valette-Silver, N. J.**; Matlock, G. C.; Snider, J.: Ecological forecasts: transferring science to management
- B3. **Bacher, C.**; Le Hir, P.; Menesguen, A.; Gentien, P.; Chiffolleau, J. F.; Guillaud, J. F.: IFREMER research program to predict the dynamics and health of coastal and estuarine ecosystems

### **Biogeochemistry (Organic and Inorganic)**

- B4. **Kana, T. M.**; Cornwell, J. C.; Zhong, L.: Denitrification rate and efficiency determined from in situ dinitrogen accumulation in bottom water of the Chesapeake Bay
- B5. **An/Soomro, S.**: Tight coupling between organic matter input and sediment oxygen demand (SOD) in estuarine tidal flat sediments
- B6. **Pisani, O.**; Maie, N.; Jaffe, R.: Fate and role of mangrove leaf tannins in dissolved organic nitrogen (DON) cycling in subtropical estuaries
- B7. **Waterson, E. J.**; Canuel, E. A.: Sources of sedimentary organic matter in the Mississippi River and adjacent Gulf of Mexico
- B8. **Kiss, E.**; Cornwell, J. C.; Owens, M. S.: Effect of pyrite oxidation on brackish pond biogeochemistry: challenges faced by using dredge sediment for habitat development at Hart Miller Island
- B9. **O'Keefe, J. A.**; Cornwell, J. C.: Sedimentary profiles of nutrient and metal burial within a salinity gradient of the Patuxent River sub-estuary, Maryland
- B10. **Iizumi, H.**; Suzuki, K.; Yamamura, O.: Endocrine disruptor dynamics in seagrass beds
- B11. **Bernhardt, P. W.**; Mulholland, M. R.; Watson, A. M.: Rates of peptide hydrolysis in a lower Chesapeake Bay tributary during seasonal blooms and cultures of bloom-forming dinoflagellates
- B12. **Woodall, D. W.**; Trefry, J. H.; Trocine, R. P.; Hall, L. M.; Morris, L. J.: The relative importance of color, aluminosilicates and organic matter
- B13. **Henderson, G. K.**; Steinberg, D. K.; Bronk, D. A.: The role of mesozooplankton and microzooplankton grazers in the production of dissolved organic matter (DOM)

- B14. **Ruiz, S.**; Fourqurean, J. W.; Childers, D.; Chambers, R. M.: Effects of iron and organic matter addition on sediment biogeochemistry and seagrass growth in a subtropical carbonate environment

- B15. **Barrett, K. R.**; McBrien, M. A.: Chemical and biological assessment of an urban, estuarine marsh in the Hackensack Meadowlands of northeastern New Jersey
- B16. **Michaels, R. E.**; Zieman, J. C.: Effects of sea-level rise on pore water biogeochemistry and salt marsh productivity and stability

### **Physical and Biogeochemical Processes in the Albemarle-Pamlico Estuarine System**

- B17. **Walsh, J. P.**; Riggs, S. R.; Mallinson, D. J.; Ames, D. V.; Byers, B. N.: Methodology for assessing the probability of inlet formation along the Outer Banks, North Carolina
- B18. **Grand Pre, C. A.**; **Corbett, D. R.**; Culver, S. J.; Farley, M. B.; Farrell, K. M.; Hillier, C.; Horton, B. P.; Riggs, S. R.; Snyder, S. W.; Thieler, E. R.: Evaluating Holocene paleoenvironmental change in Pamlico Sound, North Carolina via geochemical and paleobiological proxies

### **Extreme Sediment Biogeochemistry: Observational and Experimental Results from Hypereutrophic Ecosystems**

- B19. **Sutula, M.**; Kamer, K.; Briscoe, E.: Benthic nitrogen flux in a highly eutrophic southern California estuary: measurements from batch incubations under varying environmental conditions

### **Coral Diseases: An Increasing Threat to Coral Reefs Worldwide**

- C1. **Nieves, P. R.**; Devine, B.; Rogers, C.; Muller, E.: Mapping the distribution of disease on *Acropora palmata* around St. John, US Virgin Islands

### **Habitat and Habitat Selection**

- C2. **Viehman, S.**; Kenworthy, W. J.; Burke, J. S.; Bonn, C.: Characterization and function of an extensive system of banks and release channels in the Florida Keys National Marine Sanctuary
- C3. **Decker, M. B.**; Hood, R. R.; Brown, C. W.; Purcell, J. E.; Gross, T. F.: Development of habitat models for predicting the abundance and distribution of Chesapeake Bay jellyfish (*Chrysaora quinquecirrha*)

- C4. **Trebitz, A. S.**; Brazner, J. C.; Morrice, J. J.; Sierszen, M. E.; Thompson, J. A.: Biogeographic, hydrologic and human impacts on fish assemblages and their habitat in Great Lakes coastal wetlands
- C5. **Noble, E. B.**; Hall, K. M.: Submerged aquatic vegetation habitat mapping using aerial photography
- C6. **Larsen, K. M.**; Perry, H. M.; Biesiot, P. M.: Marsh edge assemblages in vegetated and nonvegetated habitats in a tidal marsh in the western Mississippi Sound
- C7. **Posey, M. H.**; Alphin, T. D.; Harwell, H. D.: Design considerations for the restoration of intertidal oyster reefs
- C8. **Slagle, A. L.**; Ryan, W. B.; Nitsche, F. O.; Carbotte, S. M.; Bell, R. E.: Identifying zebra mussel distribution in the Hudson River estuary using high-resolution geophysical data
- C9. **Hengst, A. M.**; Murray, L.: Restoration of *Potamogeton perfoliatus* in mesohaline reaches of the Chesapeake Bay
- C10. **Waggy, G. L.**; Woodrey, M. S.; May, C. A.; Peterson, M. S.; Clark, J.; Held, D. W.: Ecology of salt panne habitats in *Juncus roemerianus* salt marshes of the north-central Gulf of Mexico: preliminary data
- C11. **Woodrey, M. S.**; Cooper, R. J.; Ogle, B. M.; Rodriguez, T. M.; Leach, III, F. E.: Abundance, distribution, and habitat associations of marsh birds wintering in salt marshes in Mississippi

### Innovative Techniques for Assessing Fish and Invertebrate Habitat Linkages in Estuaries and Coastal Systems

- C12. **Smith, L. M.**; Jordan, S. J.; Dantin, D. D.: Geographic models linking biological responses to habitat change in northern Gulf of Mexico estuaries: a research collaboration
- C13. **Limburg, K. E.**; Elftman, M.; Huang, R.; Bilderback, D.; Kristiansson, P.; Landergren, P.; Coughlan, D.: It's all in the head: fish habitat linkages and recruitment processes seen in otolith micro-elemental maps

### Impacts of Climate Variability

- C14. DuMond, D. M.; **Hackney, C. T.**: Change in salt-sensitive tidal wetland vegetation during a severe drought in the Cape Fear Estuary, 2000–2004
- C15. **Fenger, T. L.**; Surge, D. M.; Milner, N.: Calibration of *Ostrea edulis* using variations in  $\delta^{18}\text{O}$ : implications for reconstructing seasonality and environment

- C16. **Kelly, G.**; Surge, D.; Arnold, W. S.; Walker, K. J.: Isotope sclerochronology in shells of juvenile *Mercenaria mercenaria*, *M. campechiensis*, and their natural hybrid form (Bivalvia)
- C17. **Anderson, B. A.**; Moore, K. A.; Orth, R. J.; Wilcox, D.; Kenne, A. K.; Neikirk, B. B.; Marion, S.: Seagrass restoration response to water quality conditions: a comparison of coastal lagoon and estuarine systems
- C18. **Branco, A. B.**; Kremer, J. N.: Linking hydrology and watershed land use to colored dissolved organic matter (CDOM) in estuaries
- C19. **Poirrier, M. A.**; Spalding, E. A.: Effects of *Rangia* clams on habitat quality in Lake Pontchartrain Louisiana
- C20. **Bos, J. K.**; Newton, J. A.; Albertson, S. A.: Interannual variation in water quality properties of Puget Sound, Washington, as revealed by time-series analysis

### Scientist - Community Group Interactions in Restoration Efforts for Estuaries and their Watersheds

- D1. **Griffen, L. M.**; Greening, H. S.: Developing management recommendations for man-made dredged holes in Tampa Bay, Florida: involving local anglers in science-based management decisions
- D2. **Serrano, L.**; DeLorenzo, M.: Water quality restoration for coastal subdivision retention ponds
- D3. **defur, P. L.**; Newman, K. T.: The relationship between the scientific community and citizen organizations in contaminated sites
- D4. **Diefenderfer, H. L.**; Roegner, G. C.; Thom, R. M.; Dawley, E. M.; Whiting, A. H.; Johnson, G. E.; Sobocinski, K. L.; Ebberts, B. D.: Evaluating cumulative ecosystem response to restoration projects in the Columbia River estuary
- D5. **Dantin, D. D.**; Smith, L. M.; Cicchetti, G.; Chintala, M. M.; Jordan, S. J.; Gleason, T. R.: Towards large-scale geographic models for tiered aquatic life use support: linking biological responses to habitats
- D6. **Fielder, B. R.**; Dellapenna, T. M.; Savarese, M.; Majzlik, E. J.: Effects of watershed management on oyster reef distribution in three southwest Florida estuaries
- D7. **Field, J. M.**; Hunt, C.; Rust, S. W.; Burke, P. M.: Optimization of large-scale estuarine water quality monitoring networks in South Florida

**Adapting and Transferring Science to Managers - Research, Case Studies and Connections**

- D8. **Brownlee, E. F.**; Sellner, S. G.; Sellner, K. G.: Managing algal blooms in tidal and non-tidal waters: clays and barley straw
- D9. **Iannuzzi, T. J.**; Thelen, J. B.; Buys, D. J.; Larew, S. M.; Humbles, T.: Environmental conditions at Barren Island in the Mid-Chesapeake Bay: aquatic investigations
- D10. **Thelen, J. B.**; Iannuzzi, T. J.; Ludwig, D. F.; Shisler, J. K.; Humbles, T.: Environmental conditions at Barren Island in the Mid-Chesapeake Bay: terrestrial and wildlife investigations
- D11. **Tweed, S. M.**: Using commercial oyster spat collectors to determine temporal and spatial distribution of fouling species

**Coastal Invasive Species: Impacts, Management and the Role of Modified Habitats**

- D12. Casanova, T. D.; **Gilman, M.**; Petrizi, B.: Subtidal population distribution of *Hemigrapsus sanguineus* in Clinton Harbor, Connecticut
- D13. **Brown, K. R.**; Walters, L. J.; Glardon, C. G.; Sacks, P. E.; Beach, K. S.; Stam, W. T.; Olsen, J. L.: Retail, on-line and field availability of native versus non-native forms of the green macroalga *Caulerpa* in the State of Florida
- D14. **Thomson, III, F. K.**; Heinemann, S. A.; Hynes, W.; Dobbs, F. C.: Ships' ballast as a potential vector for the transfer of antibiotic resistance genes among estuarine environments
- D15. **Heinemann, S. A.**; Thomson, F.T.; Hynes, W. L.; Dobbs, F.C.: Assessing the potential for horizontal gene transfer of plasmid-borne antibiotic resistance in *Vibrio cholerae* isolated from ships' ballast
- D16. **Boyd, S. G.**; Bushek, D.: Establishment of the non-indigenous Asian isopod *Synidotea laevidorsalis* n Delaware Bay, USA
- D17. **Donnelly, M. J.**; Walters, L. J.: Is the exotic Brazilian pepper *Schinus terebinthifolius* a threat to mangrove ecosystems in Florida?
- D18. **Jönsson, S.**; Doblin, M. A.; DiTullio, G. R.; Dobbs, F. C.: Phytoplankton dynamics in ships' ballast tanks: comparison of fluorometric, HPLC and species analyses
- D19. **Glardon, C. G.**; Walters, L. J.; Quintana-Ascencio, P.; Weishampel, J. F.; Stam, W.; Olsen, J.: Predicting risks of invasion of *Caulerpa* species in Florida
- D20. **Boyer, K. E.**; Reynolds, L. K.: Pepperweed invasion in marshes of San Francisco Estuary: changes to sediment characteristics and effects on germination of natives

**Ecosystems and Trophic Dynamics**

- E1. **Ikenaga, M.**, Boyer, J. N.: Spatial changes in sediment bacterial communities in the Everglades and Florida Bay
- E2. **Dumbauld, B. R.**; Kuris, A. M.; Chapman, J.; Markham, J.; Torchin, M.: A preliminary assessment of the potential for augmentative biological control of burrowing shrimp in estuarine oyster aquaculture
- E3. **Koo, B. J.**; Woo, H. J.; Lie, H. J.; Ahn, S. M.: Distribution of macrobenthic communities on the Saemangeum tidal flat, west coast of Korea
- E4. **Stiner, J. L.**; Walters, L. J.: Predation on the eastern oyster *Crassostrea virginica* on intertidal reefs impacted by recreational boating
- E5. **Calfee, M. W.**; West, T. L.; Clough, L. M.; Corbett, D. R.: Bacterial activity following sediment resuspension by bottom trawling
- E6. **Betournay, S. H.**; Ambrose, W. G.; Carroll, M.; Clough, L. M.; Lopez, G. R.; Sun, M. Y.: The digestibility of phytoplankton and ice algae by Alaskan marine benthic organisms
- E7. **Raz-Guzman, A.**; Montagna, P.: Isotopic composition of estuarine benthic communities in south Texas, USA
- E8. **Marsh, A. C.**; Blum, L. K.; Christian, R. R.: Effects on a salt marsh ecosystem following a brown marsh event
- E9. **Seliskar, D. M.**; Gallagher, J. L.: Tidal creek surface film structural and metabolic dynamics
- E10. **Iwaniec, D. M.**; Childers, D. L.: Regulation of microbial mats in the oligotrophic freshwater southern Everglades
- E11. **Armitage, A. R.**; Fourqurean, J. W.: Short-term herbivore impacts and long-term implications of nutrient enrichment on seagrass species distribution
- E12. **Croxtion, A. N.**; Wikfors, G. H.; Gragg, R. D.: Trophic transfer of sediment-associated contaminants from microphytobenthic communities to bivalve species
- E13. **Baggett, L. P.**; Heck, K. L.; Armitage, A. R.; Frankovich, T. A.; Fourqurean, J. W.: The effects of nutrient enrichment on the stoichiometry of epiphyte grazers associated with the seagrass *Thalassia testudinum* in Florida Bay
- E14. **Lamberson, J. O.**; Nelson, W. G.; Lee II, H.: A probabilistic survey of fish tissue contamination in West Coast estuaries: results from the National Coastal Assessment 1999–2003
- E15. **McIver, M. R.**; Mallin, M. A.; Parsons, D. C.; Raber, M. J.; Cahoon, L. B.: Benthic and water column chlorophyll *a* distribution in a series of urbanizing tidal creeks

- E16. **Sin, Y.**; Soh, H.; Hyun, B.: Effect of freshwater input from a dike on estuarine size-structured phytoplankton dynamics
- E17. **Rocha, A. M.**; Mulholland, M. R.; Watson, A. M.: Incorporation of leucine and thymidine by phytoplankton vs. bacteria using modified extraction techniques
- E18. **Morse, R. E.**; Mulholland, M. R.; Bernhardt, P. W.: Peptide hydrolysis and uptake of *Trichodesmium*-derived dissolved organic nitrogen (DON) by *Karenia brevis*: a direct trophic link
- E19. **Bielecka, L.**; Zmijewska, M. I.; Olszewska, A.: How deep changes are observed in the Gulf of Gdansk ecosystem because of anthropogenic pressure (Baltic Sea)
- E20. **Turnbull, L. C.**; Bridgham, S. D.: The effects of the invasive seagrass *Zostera japonica* on ecosystem processes in an Oregon estuary

## Nutrients

- F1. **Swaney, D. P.**; Howarth, R. W.; Galford, A. E.; Marino, R. M.; Boyer, E. W.: Latitudinal and temporal changes in discharge and nitrogen fluxes from large watersheds in the Northeastern United States: an application of ReNuMa
- F2. **Coley, T. L.**; Rudnick, D. T.: Long term nutrient trends from the Everglades Agricultural Area to two south Florida estuaries: a comparison of Florida Bay and Biscayne Bay
- F3. **Crean, D. J.**; Iricanin, N.: Comparative analysis of net loads from Lake Okeechobee delivered into two different estuarine systems
- F4. **Filippino, K. C.**; Mulholland, M. M.; Bernhardt, P. W.; Austin, J. A.; Valle-Levinson, A.: Evaluation of nutrient distributions at the Chesapeake Bay Mouth: physical and biological implications
- F5. **Doering, P. H.**; Chamberlain, R. H.; Haunert, K. H.: Long term changes in water quality in the Caloosahatchee Estuary, FL
- F6. **Saindon, D. D.**; Frazer, T. K.; Osenberg, C. W.: Quantifying the effects of nutrient reduction on growth rates of phytoplankton in Kings Bay, Florida
- F7. **Picard, C. R.**; Peterson, B. J.; Hopkinson, C. S.; Deegan, L. A.: Nitrate and phosphate exchange in experimentally fertilized tidal creeks
- F8. **Losada, G. D.**; Childers, D. L.: Determining sources of phosphorous spikes in a Florida Everglades estuary

- F9. **Bettez, N. D.**; Howarth, R. W.; Marino, R. M.; Davidson, E. A.: Measuring N-deposition along roadways due to traffic emissions

## Use of Observing Systems for Understanding, Monitoring and Predicting Harmful Algal Blooms and Hypoxia

- F10. **Hall, N. S.**; Whipple, A.; Luettich, R. A.; Paerl, H. W.: Application of an autonomous vertical profiling system to examine vertical distribution dynamics of phytoplankton in the Neuse River Estuary, NC
- F11. **Hannafious, D. E.**; Rose, R.; Newton, J. A.: Hood Canal Dissolved Oxygen Program Citizens Monitoring: integrating a volunteer monitoring effort with the needs of a partnership-based research program
- F12. **Deamer, N. J.**; Reed, R. E.; Burkholder, J. M.; Shedd, T. R.; Widder, M. W.; van der Schalie, W. H.: A real-time fish sentinel biosensor of harmful algal blooms and other stressors
- F13. **Thessen, A. E.**; Glibert, P. M.; Stoecker, D. K.: Domoic acid production during periods of low temperature and high light: a novel hypothesis for toxin production in *Pseudo-nitzschia* spp.
- F14. **Berman, M.**; Bergondo, D.; Nixon, S.; Oviatt, C.: Bands of tidally induced vertical mixing transport hypoxic water to the surface in Narragansett Bay

## Physical and Biological Factors Affecting Horseshoe Crab Abundance and Distribution in Coastal Waters

- F15. **Grady, S. P.**; Valiela, I.: Population dynamics of the Atlantic horseshoe crab, *Limulus polyphemus*, in Cape Cod estuaries
- F16. **Itow, T.**: Crisis in Japan: the decimation of the horseshoe crab
- F17. Burton, W. H.; **Kelley, F. S.**; Pasquale, J.: Horseshoe crab spawning and juvenile movement patterns at the Egg Island, New Jersey, and Kelly Island, Delaware, wetland restoration areas
- F18. **Gerhart, S. D.**; Anderson, C.; McMillen-Jackson, A. L.: Predicting horseshoe crab (*Limulus polyphemus*) nesting areas using GIS
- F19. **Tanacredi, J. T.**; Ainbinder, R.: Preliminary inventory status of *Limulus* populations on Long Island: from anecdote to annual survey
- F20. **Hume, K.**; Vulinec, K.; Berkson, J.: Horseshoe crabs, conservation and a method for determining reproductive condition

# Oral Sessions - Thursday

## CHESAPEAKE RESEARCH COLLOQUIUM PLENARY

### What's the future for the Chesapeake: A Model for Other Estuaries?

- Chair(s): K. Sellner  
 Location: M3  
 8:00 AM **Boesch, D. F.**: Can knowledge be used, policies aligned, and greed overcome to create a more resilient Chesapeake Bay ecosystem?  
 8:30 AM **Hines, A. H.**: Fishery failures and aquaculture expectations: implications of shifting in modes of estuarine food production.  
 9:00 AM **Simpson, T. W.**; Aiosa, J.: Agricultural best management practices: why are we not seeing expected water quality benefits  
 9:30 AM **Sellner, K. G.**: Integrated observing systems from land-to-sea: benefits of an integrated program across NEON, CUASHI, CLEANER, IOOS and ORION

### COL-01: Estuaries Under Siege: Options for the Future

- Chair(s): D. Boesch  
 Location: M1  
 10:15 AM **Greer, J. R.**; Boesch, D. F.: Uneasy expectations: scenarios for the future of North America's largest estuary  
 10:30 AM **Bonsdorff, E.**: The Baltic Sea - a naturally stressed ecosystem  
 10:45 AM **Luoma, S. N.**; Cloern, J. E.: Science-management issues in the San Francisco Bay-Delta: the past and the future  
 11:00 AM **Mee, L.**: Regime shift and imperilled recovery in the Black Sea  
 11:15 AM **Twilley, R. R.**; Steyer, G.: Ecosystem forecasting and restoration realities: prescription for the Mississippi River Deltaic Plain  
 11:30 AM **Wong, M. H.**; Cao, W. Z.: Coastal zone management in China: a review

### COL-02: Estuarine Implications of the Impending Shift in Estuarine Food Production

- Chair(s): A. Hines, M. Luckenbach  
 Location: M3  
 10:15 AM **Zohar, Y.**: The role of biotechnology in aquaculture-based food production  
 10:45 AM **Leber, K. M.**: Responsible stock enhancement of estuarine species: opportunities, constraints and tackling uncertainty  
 11:15 AM **McVey, J.**: The role of aquaculture in integrated coastal and ocean management: an ecosystem approach

### COL-03: Productivity and Diversity of Estuarine Plankton and Fish Resources: Scale-Dependent Interactions from Watershed to Sea

- Chair(s): M. Roman  
 Location: M1  
 4:15 PM **Tilburg, C. E.**; Houser, L. T.; Steppe, C. N.; Garvine, R. W.; Epifanio, C. E.: Effects of coastal transport on larval patches: models and observations  
 4:30 PM **Steinberg, D. K.**; Brush, M. J.: Seasonal cycles of mesozooplankton in the York River tributary of Chesapeake Bay, Virginia, USA  
 4:45 PM **Roman, M.**; Boicourt, W.; Kimmel, D.; Zhang, X.: Seasonal and annual variability in the spatial patterns of zooplankton biomass in Chesapeake Bay  
 5:00 PM **Kimmel, D. G.**; Roman, M. R.: Long-term changes in zooplankton abundance in the upper Chesapeake Bay

### COL-04: Integrated Observing Systems and their Applications

- Chair(s): W. Ball  
 Location: M2  
 10:15 AM **Dallmeier, F.**; Megonigal, J. P.: MAREO: Contributions of the mid-Atlantic region to the development of a National Ecological Observatory Network (NEON)  
 10:30 AM **Hooper, R. P.**; Duncan, J. M.: HydroView: an integrated research platform for watershed science

10:45 AM	<b>Dressler, K. A.</b> ; Boyer, E. W.; Duffy, C. J.; Piasecki, M.; Reed, P. M.; Salvage, K. M.; Toran, L.: A community-based hydrologic observing system in the Susquehanna River basin
11:00 AM	Ball, W. P.; <b>Kemp, W. M.</b> ; DiToro, D. M.; Gross, T. F.: Design of a collaborative large-scale engineering analysis network for Chesapeake Bay research and management
11:15 AM	<b>Atkinson, L. P.</b> ; Malone, T.: IOOS & OCEAN.US: links from estuaries to coastal oceans
11:30 AM	<b>Boicourt, W. C.</b> : Chesapeake Bay Observing System: vision, lessons, evolution
11:45 AM	<b>Piasecki, M.</b> : Data management and interoperability challenges among environmental observatories

### **COL-05: Managing our Lands for Reducing Loads**

Chair(s):	T. Simpson
Location:	M2
2:00 PM	<b>Parker, D.</b> ; Pease, J.; Hansen, D.; Collins, A.; Arrington, K.; Abdalla, C.: The role of a regional nutrient budget in addressing excess phosphorus
2:15 PM	<b>Benham, B.</b> ; Yagow, G.; Dillaha, T.; Pease, J.; Kibler, D.; Bosch, D.: Nutrient reduction potential of agricultural best management practices (BMPs): the state of our knowledge
2:30 PM	<b>Randall, C. W.</b> : Reducing nutrient discharges from wastewater treatment plants: an ongoing Chesapeake success story
2:45 PM	<b>Shenk, G. W.</b> ; Sweeney, J. S.; Mader, R. L.; Linker, L. C.: Estimating nonpoint source load changes in response to natural and anthropogenic factors
3:00 PM	<b>Phillips, S.</b> ; Langland, M.; Preston, S.; Lindsey, B.: Factors affecting water-quality changes in the Chesapeake Bay watershed: implications for restoration of the nation's largest estuary

### **COL-06: Challenges to and Prospects for Large Marine Ecosystem-based Fisheries Management**

Chair(s):	Margaret McBride, Ken Sherman
Location:	M3
2:00 PM	<b>Houde, E. D.</b> : Developing and implementing ecosystem-based approaches to fisheries management in Chesapeake Bay
2:30 PM	<b>Sherman, K.</b> : Resource productivity and management for sustainability of the NE Continental Shelf Large Marine Ecosystem

3:00 PM	<b>Sutinen, J. G.</b> : The economics of shared coastal resources
3:30 PM	<b>Summers, J. K.</b> : Selecting, developing, and managing ecological indicators of estuarine condition: the National Coastal Assessment experience
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Malone, T. C.</b> : The U.S. Integrated Ocean Observing System (IOOS) and ecosystem-based management
4:45 PM	<b>Beal, R. E.</b> : Efforts to restore the Atlantic striped bass: cooperative management, congressional acts, sacrifice and a little luck

### **COL-19: Benthic-Pelagic Couplings and Managing Dissolved Oxygen in the Chesapeake and Coastal Bays**

Chair(s):	I. Anderson
Location:	M1
2:00 PM	<b>Kemp, W. M.</b> ; Testa, J. M.; Smith, E. M.; Boynton, W. R.: Organic carbon balance, pelagic-benthic interactions, and estuarine hypoxia: inferences from rate measurements and box models
2:15 PM	<b>Boynton, W. R.</b> ; Anderson, J. T.; Barnes, J.; Brownlee, D. C.; Frank, J.: Solomons Harbor Program: monitoring, public debate and zoning actions
2:30 PM	<b>Newell, R. I.</b> ; Fulford, R. S.; Cerco, C. F.; Breitburg, D. L.; Koch, E. W.; Fisher, T. R.: The influence of eastern oysters on ecological processes in Chesapeake Bay: Insights from recent modeling studies
2:45 PM	<b>Brush, M. J.</b> : The role of benthic-pelagic coupling in the development of seasonal hypoxia/anoxia at three spatial scales in the Chesapeake Bay
3:00 PM	<b>Shen, J.</b> ; Sun, S.; Wang, T.; Herman, J.; Arnold, G.; Wang, H.; Mason, P.: A modeling study of impact of benthic fluxes on diurnal dissolved oxygen variation in a tidal creek of Chesapeake Bay

- 3:15 PM **Haas, L. W.**; Brush, M. J.; Kator, H. I.; Anderson, I. C.: Quantifying hypoxic volume in small-scale anoxic/hypoxic environments
- 3:30 PM **Cornwell, J. C.**; Owens, M. S.; Boynton, W. R.: Refining the estimates of denitrification, N burial and P burial in Chesapeake Bay sediments

### **COL-20: Restoration in Highly Urbanized Estuaries**

- Chair(s): J. Rieger
- Location: M2
- 4:15 PM **Rieger, J. F.**: Restoration of the highly urbanized Elizabeth River watershed
- 4:45 PM **Priest, W. L.**: Tidal wetland restoration in a highly urbanized estuary
- 5:00 PM **Leggett, Jr., A. T.**; Brumbaugh, R. D.; Sorabella, L. C.; Wesson, J. A.; Blow, A. M.: Restoration of oysters in an urbanized watershed
- 5:15 PM **Dauer, D. M.**; Alden, III, R. W.: Sediment contaminant remediation and benthic community restoration potential in an urbanized watershed, the Elizabeth River, Virginia
- 5:30 PM **Ludwig, D. F.**; Iannuzzi, T. J.: Habitat equivalency assessment for urban estuaries: an analytical hierarchy process for restoration planning

### **SPS-07: Sustainability and Wildlife Management in Coastal Wetlands**

- Chair(s): Ron Brockmeyer, Doug Scheidt
- Location: M4
- 10:15 AM **Brockmeyer, R. E.**; Scheidt, D. M.; Cahoon, D. R.; Blum, L. K.; Parkinson, R. W.; Stewart, J. B.: The Wetlands Initiative at Merritt Island National Wildlife Refuge: illuminating issues of coastal wetland sustainability under wildlife management
- 10:45 AM **Nyman, J. A.**: Sustainability of wildlife management and coastal wetlands at the Marsh Island Wildlife Refuge, Louisiana Department of Wildlife and Fisheries
- 11:00 AM **Foret, J. D.**: Effects of marsh management on marsh elevation and vertical accretion, Rockefeller Refuge, Louisiana
- 11:15 AM **Cole, M. L.**; Ferguson, W. S.; Raposa, K.: Nekton usage and subsidence of a tidally restricted New England salt marsh
- 11:30 AM **Adamowicz, S. C.**; James-Pirri, M. J.; Wagner, L. A.; O'Brien, K. M.; Taylor, G.; Whitford, S.: The effects of ditch plugging for wildlife management: a 6-year case study of two southern Maine salt marshes

THURSDAY

- 11:45 AM **James-Pirri, M. J.**; Erwin, R. M.; Prosser, D. M.; Taylor, J.: Assessment of open marsh water management on salt marsh communities along the Atlantic coast

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### POSTER SESSION and LUNCH 12noon - 2pm

- 2:00 PM **Hood, W. G.**; Simenstad, C. A.; Slater, G. L.; Tanner, C.: Salmon versus ducks: an artificial restoration dichotomy in Washington State
- 2:15 PM **Arrington, D. A.**; Layman, C. A.; Valentine, L.; Cherry, J. A.: Bahamian tidal creeks as essential fish habitat: hydrologic fragmentation imperils sustainability
- 2:30 PM **Thomas, C. R.**: Nutrient cycling in Indian River Lagoon marsh impoundments: using ecological network analysis to determine effects of management
- 2:45 PM **Mielcarek, K. C.**; Stevenson, J. C.; Staver, L. W.; Cornwell, J. C.: Wetland restoration on Poplar Island, Maryland
- 3:00 PM **Rivers, D. O.**; Short, F. T.: Impact of grazing by Canada geese (*Branta canadensis*) on an eelgrass (*Zostera marina* L.) meadow, New Hampshire, USA
- 3:15 PM **McGuire, C. R.**; MacKenzie, R. A.: The effects of introduced tilapia and poecilid fish on insect emergence rates: a case study of Hamakua Marsh, Oahu, Hawaii
- 3:30 PM **Watters, C. F.**; Wood, R. C.: Mortality of diamondback terrapins (*Malaclemys terrapin*) as bycatch in "ghost" crab traps

### **SPS-13: Observing and Forecasting Systems for Urban and Coastal Ocean Environments**

- Chair(s): Alan Blumberg, William Boicourt
- Location: M6
- 10:15 AM **Bruno, M. S.**; Blumberg, A. F.; Herrington, T. O.; Fullerton, B.; Kruger, D.; Fan, S.; , S. H.: An operational observation and forecast system for New York Harbor and the New Jersey Coast
- 10:45 AM **Friedrichs, C. T.**; Brubaker, J. M.; Wright, L. D.; Reay, W. G.; Nelson, T.; Brasseur, L. H.: The Virginia Institute of Marine Science Estuarine Observing System
- 11:00 AM **Cheng, R. T.**; Garfield, N.; Smith, R. E.: Ten year anniversary of San Francisco Bay PORTS and beyond
- 11:15 AM **Meyers, S. D.**; Luther, M. E.; Galperin, B.; Gilbert, S. A.; Subramanian, V.; Scudder, J.; Vincent, M. S.; Pribble, R.; Janicki, A.: An integrated observing and modeling system for Tampa Bay

- 11:30 AM **Xia, M.**; Xie, L.; Pietrafesa, L. J.; Peng, M.: The Cape Fear River Estuary Modeling System  
 11:45 AM **Vincent, M. S.**; Aikman, F.; Gross, T. F.: NOAA's NOS Operational Estuarine and Coastal Forecast Systems: mandates, requirements and research to operations

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POSTER SESSION and LUNCH 12noon - 2pm

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- 2:00 PM **Morrison, J. R.**; Smith, B.; Morrison, A. M.; Barnard, A.; Langan, R.; Pennock, J.; Campbell, J. W.: Linking estuarine measurements to coastal seas and history: giving real-time data from observing systems historical context  
 2:15 PM **Weisberg, R. H.**; Zheng, L.: An FVCOM simulation of the Tampa Bay Estuary circulation  
 2:30 PM **Lanerolle, L.**; Patchen, R.: Numerical modeling of the initiation and fate of harmful algal blooms on the West Florida Shelf  
 2:45 PM **Frick, W. E.**; Francy, D. S.; Darner, R. A.; Ge, Z.: Developing site-specific models for forecasting bacteria levels at coastal beaches  
 3:00 PM **Wilson, R. E.**; Flagg, C. N.: The Bridgeport-Port Jefferson Observing System: operational experience and scientific results  
 3:15 PM **Wall, G. R.**; Nystrom, E. A.: The nuts and bolts of a near-real-time suspended-sediment discharge monitoring station in the Hudson River Estuary, New York  
 3:30 PM **Brubaker, J. M.**; Brasseur, L. H.; Friedrichs, C. T.: Variability of wind-induced mixing in tidal estuaries

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BREAK 3:45pm - 4:15pm

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- 4:15 PM **Lohrenz, S. E.**; Redalje, D. G.; Howden, S. D.: Nitrate and physical variability in the Mississippi Bight  
 4:30 PM **Vandever, J. P.**; Brubaker, J. M.; Friedrichs, C. T.: ADCP measurement of waves in the York River estuary, Virginia, USA  
 4:45 PM **Brasseur, L. H.**; Brubaker, J. M.; Friedrichs, C. T.: Vertical mixing processes in the York River estuary from observations and modeling  
 5:00 PM Mulligan, R. P.; **Siegel, E. M.**; Hay, A. E.: Acoustic remote sensing of high frequency surface gravity waves in coastal environments  
 5:15 PM **Barnard, A. H.**; Morrison, J. R.; McLean, S.; Smith, B.: A sentinel buoy information system for real-time water quality monitoring in estuarine and coastal environments  
 5:30 PM **Piasecki, M.**: IM2: a dissemination system for observation and forecast data

- 5:45 PM **Wilkerson, F. P.**; Lew, K.; Marchi, A.; Hogue, V.; Koch, F.; Dugdale, R. C.: Tracking phytoplankton blooms and eutrophication with daily monitoring in Central San Francisco Bay

**SPS-25: Coral Diseases: An Increasing Threat to Coral Reefs Worldwide**

Chair(s): Caroline Rogers, Cheryl Woodley, Sylvia Galloway

Location: M5

*Interactive posters may be viewed in M4 during the oral presentations of this session*

- 10:15 AM **Bruckner, A. W.**: The recent emergence of coral diseases: What do we know and how are we addressing the problem?  
 10:45 AM **Santavy, D. L.**; Mueller, E.; MacLaughlin, L.; Quarles, R.; Campbell, J.; Peters, E. C.: The prevalence and distribution of "white coral diseases" in South Florida from 1997-2004  
 11:00 AM **Rogers, C. S.**; Muller, E. M.: The role of white pox and white band disease in limiting reef recovery in Haulover Bay, St. John, US Virgin Islands  
 11:15 AM **Muller, E. M.**; Rogers, C. S.: Spatial distribution and temporal incidence of white pox disease on *Acropora palmata* in St. John, US Virgin Islands, and the fate of white pox lesions  
 11:30 AM **Miller, J.**; Waara, R.: Is the coral disease white plague killing Tektite Reef in Virgin Islands National Park?  
 11:45 AM Bruckner, A. W.; **Bruckner, R. J.**: Patterns of tissue loss and regeneration of lesions on *Acropora palmata* colonies affected by white patch disease

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POSTER SESSION and LUNCH 12noon - 2pm

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- 2:00 PM **Davy, J. E.**; Fine, M.; Blackall, L. L.; Hoegh-Guldberg, O.: Factors influencing the incidence and infectivity of disease in Poritid corals on the Great Barrier Reef  
 2:15 PM **Jacobson, D. M.**; Willis, B.; Page, K.; Sussman, M.: Fine scale temporal and spatial dynamics and microbiology of an Acroporid coral disease outbreak  
 2:30 PM **Sussman, M.**; Bourne, D. G.; Page, C.; Jacobson, D.; Willis, B.: Isolation and identification of the causative agent for a white syndrome coral epizootic in the Marshall Islands  
 2:45 PM **Bythell, J. C.**; Pantos, O.: Bacterial 16S rRNA gene diversity in white diseases and black band disease from different coral host species

3:00 PM	<b>Pantos, O.</b> ; Bythell, J. C.: Bacterial community structure associated with white band disease in the Elkhorn coral <i>Acropora palmata</i>
3:15 PM	<b>Smith, G. W.</b> ; Gil-Agudelo, D. L.; Weil-Mayagüez, E.: Studies on white band disease in Puerto Rico
3:30 PM	<b>Vargas-Angel, B.</b> ; Smith, A. J.: White band disease assessment in Broward County FL
3:45 PM	<b>Polson, S. W.</b> ; McLaughlin, S. M.; Woodley, C. M.: Characterization of microbial communities associated with acroporid corals during 2003 mortality events in the Florida Keys and Dry Tortugas
BREAK 3:45pm - 4:15pm	
4:15 PM	<b>Sileo, L.</b> ; Rogers, C.; Work, T.; Lorbach, S.; McLaughlin, S.; Price, K.; C. . U.; McAllister, P.; Woodley, C.; Polson, S.W.: The histopathology of white pox and white band disease
4:30 PM	<b>Sutherland, K. P.</b> ; Lipp, E. K.; Porter, J. W.: Genomic profiling of <i>Serratia marcescens</i> from the Florida Keys: identifying the ecology and potential origin of the white pox coral pathogen
4:45 PM	<b>Cook, G.</b> ; Gillevet, P.; Peters, E.; Rothenberger, J. P.; Sikaroodi, M.; Jonas, R. B.: Comparison of bacterial communities between geographically separated corals infected with white plague type II
5:00 PM	<b>Richardson, L. L.</b> ; Remily, E. R.; Sekar, R.; Pinzon, J.; Voss, J. D.; Foley, J. E.; Mills, D. K.: White plague type II on Caribbean coral reefs
5:15 PM	<b>Williams, D. E.</b> ; Miller, M. W.: Gross manifestations of acroporid white disease(s): a continuum from white band to white pox

THURSDAY

5:30 PM	<b>McLaughlin, S. M.</b> ; Peters, E. C.; Work, T. M.; Sileo, L.; Lanning, L. L.; Parnell, P. G.; Morado, J. F; Vargas-Angel, B.; Price, K.; Woodley, C. M.: Observations on the histopathology of <i>Acropora</i> spp. collected during unusual mortality events of 2003 in Florida Keys and Dry Tortugas
5:45 PM	<b>Woodley, C. M.</b> ; Galloway, S. B.; Bruckner, A. W.: Coral Disease and Health Consortium: disease outbreak investigation

### SPS-36: Physical and Biogeochemical Processes in the Albemarle-Pamlico Estuarine System

Chair(s): Reide Corbett, Stan Riggs

Location: M4

*Interactive posters may be viewed in M4 during the oral presentations of this session*

4:15 PM	<b>Riggs, S. R.</b> ; Culver, S. J.; Mallinson, D.J.; Corbett, D. R.; Ames, D.V.; Grand Pre, C. A.: Holocene evolution of the barrier island and drowned-river estuarine systems of North Carolina's Outer Banks
4:30 PM	<b>Mallinson, D. J.</b> ; Riggs, S. R.; Culver, S.; Ames, D.V.; Smith, C. W.: The age and occurrence of Holocene regressive facies and pre-historic inlets on the North Carolina Outer Banks
4:45 PM	<b>Cudaback, C. N.</b> ; Eggleston, D.: Can flood-tide transport work in a lagoonal estuary?
5:00 PM	<b>Ames, D. V.</b> ; Riggs, S. R.: Relationship of storms and storm frequency to shoreline change, island elevation, and vegetation development, Cape Lookout to Ocracoke Inlet: Core Banks, NC
5:15 PM	<b>Horton, B. P.</b> ; Corbett, D. R.; Culver, S.; Edwards, R. J.; Thomson, K. H.: Modern microfossil distributions of the Outer Banks, North Carolina and the development of a transfer function to reconstruct former sea levels
5:45 PM	<b>Poulter, B.</b> : Interactions between gradual environmental change and disturbance in low-lying coastal wetland systems

### SYNTHESIS SESSION 2

#### Interactions with Estuarine Chemistry

Location: Marriott 4th Floor, Section 3

Time: 10:15 PM – 12:00 Noon

#### Request from the Session Conveners

As a courtesy to all, please plan to place your cell phone on buzzer or turn it off when you enter the oral session rooms.

## Mid-Day Poster Session - Thursday

Poster presenters should be available to answer questions during the lunch hours.

Lunch will be provided in the poster hall.

The letter and number represents the poster position within the hall;  
see page 110 for a map of the poster hall positions.

Each poster will be available for viewing for one full day: 9:00 AM – 6:00 PM.

**12:00 PM – 2:00 PM · Hampton Roads Ballroom (Marriott)**

### Productivity and Diversity of Estuarine Plankton and Fish Resources: Scale-Dependent Interactions from Watershed to Sea

- A1. **Jung, S.**; Kimmel, D. G.; Adolf, J.; Houde, E. D.; Harding, L. W.; Roman, M. R.: Biomass size spectra as integrative trophic indicators in Chesapeake Bay

### Waterbirds of the Chesapeake Bay and Vicinity: Harbingers of Change

- A10. **Perry, M. C.**; Osenton, P. C.; Wells, A. M.; Kidwell, D. M.; Lohnes, E. J.: Trophic relationships among diving ducks in Chesapeake Bay in relation to historical feeding ecology and changing Bay conditions
- A11. **Kidwell, D. M.**; Perry, M. C.: Macrobenthos composition of surf scoter (*Melanitta perspicillata*) feeding areas in a mesohaline portion of the Chesapeake Bay, Maryland

### Managing the Bay: Meeting the Mandates of Chesapeake 2000

- A12. **Landwehr, J. M.**: Spatial and temporal variability in the Kd-Secchi conversion coefficient observed among the tidal tributary rivers of the Chesapeake Bay watershed
- A13. **Baldizar, J. M.**; Rybicki, N. B.: Factors influencing water clarity at shallow water monitoring locations throughout the Chesapeake and Maryland Coastal Bays, 2002

### Harmful Algal Blooms in the Chesapeake Bay and Coastal Bays

- A14. **Watson, A. M.**; Mulholland, M. R.; Bernhardt, P. W.; Rocha, A. M.: A comparison of inorganic and organic  $^{15}\text{N}$  and  $^{13}\text{C}$  uptake over a seasonal time scale in the Lafayette and York Rivers

### New Understandings in HABs and Other Plankton, Benthos and Nekton from the Chesapeake

- A15. **Gercke, E. S.**; Oreska, M. P.; Lockwood, R.: Assessing the quality of the subfossil record from the Chesapeake Bay: can Holocene mollusks be used as a baseline for restoration?

### Basin Modeling for Research and Management

- A16. **Linker, L. C.**; Shenk, G. W.; Cerco, C. F.; Wu, J.: Application of the Chesapeake Watershed Phase 5 Community Model

### Benthic-Pelagic Couplings and Managing Dissolved Oxygen in the Chesapeake and Coastal Bays

- A17. **Nelson, B. W.**: What is the dissolved oxygen baseline?

### Restoration in Highly Urbanized Estuaries

- A18. **Gaeckle, J. L.**; Short, F. T.: Effects of initial patch size on eelgrass (*Zostera marina* L.) transplant success and fish assemblages
- A19. **Phelps, H. L.**; Greenidge, E.; Bernard, D.: WWTP aluminum sulfate discharge and *Corbicula fluminea* in the Potomac near Washington, DC
- A20. **Carlson, Jr., P. R.**; Yarbro, L. A.; Ketro, A.; Burkholder, W.: Growth, fragmentation, and thinning of volunteer seagrass patches in Old Tampa Bay

# Oral Sessions - Friday

## **COL-07: Waterbirds of the Chesapeake Bay and Vicinity: Harbingers of Change**

Chair(s): Mike Erwin

Location: M1

- 8:15 AM **Costanzo, G. R.**; Hindman, L. J.: Waterfowl breeding populations in the Chesapeake Bay
- 8:30 AM **Forsell, D. J.**; Hindman, L. J.; Bidrowski, T.; Perry, M. C.: Distribution, abundance, and population trends of diving ducks, sea ducks, and waterbirds wintering in Chesapeake Bay
- 8:45 AM **Perry, M. C.**; Osenton, P. C.; Wells, A. M.; Kidwell, D. M.; Lohnes, E. J.: Trophic relationships among diving ducks in Chesapeake Bay in relation to historical feeding ecology and changing Bay conditions
- 9:00 AM **Watts, B. D.**; Therres, G. D.; Byrd, M. A.: Status, distribution and the future of bald eagles in the Chesapeake Bay
- 9:15 AM **Williams, B.**; Brinker, D. F.; Watts, B. D.; Erwin, R. M.: The status of colonial nesting wading bird populations within the Chesapeake Bay and coastal barrier island lagoon system
- 9:30 AM **Brinker, D. F.**; Williams, B.; Watts, B. D.; Erwin, R. M.: Colonial nesting seabirds in the Chesapeake region: where have we been and where are we going?

BREAK 9:45am – 10:15am

- 10:15 AM **Wilson, M. D.**; Watts, B. D.; Brinker, D. F.; DeLuca, W.V.; Marra, P. P.: The ecological role of the Chesapeake Bay in supporting marsh bird communities
- 10:30 AM **Boettcher, R.**; Penn, T. R.; Beck, R. A.; Cross, R. R.; Terwilliger, K.: An overview of the status and distribution of Piping Plovers in Virginia
- 10:45 AM **Wilke, A. L.**; Brinker, D. F.; Watts, B. D.; Traut, A. H.; Truitt, B. R.; McCann, J. M.; Boettcher, R.; Denmon, P. P.; Beck, R. A.: The American Oystercatcher in Maryland and Virginia: status and distribution
- 11:00 AM Watts, B. D.; **Paxton, B. J.**: Osprey of the Chesapeake Bay: status, breeding distribution, and current threats
- 11:15 AM **Swarth, C. W.**; Perry, M. C.: Waterbird distribution along an estuarine gradient in winter
- 11:30 AM **Kangas, P. C.**: Evolution of the ecological role of aquatic birds in the Chesapeake Bay

- 11:45 AM **Rattner, B. A.**; McGowan, P. C.: Environmental contaminants threaten waterbirds residing in Chesapeake Bay

LUNCH 12noon – 2pm

- 2:00 PM **Viverette, C. B.**; Garman, G. C.; McIninch, S. P.; Markham, C.; Watts, B. D.; Macko, S.; Aygen, D.; Emslie, S.: Finfish-waterbird trophic interactions in Chesapeake Bay tributaries
- 2:15 PM **Llanso, R. J.**; Diaz, R. J.; Dauer, D. M.; Seitz, R. D.; Forsell, D.: Benthos of diving duck feeding habitats of Chesapeake Bay, USA
- 2:30 PM **Beck, R. A.**: Human influences and disturbances on waterbird populations at three sites in the Lower Chesapeake Bay
- 2:45 PM **Dueser, R. D.**; Moncrief, N. D.; Truitt, B. R.; Wilke, A. L.; Boettcher, R.; Martin, J. D.: Responses of colonial and beach-nesting waterbirds to predation management on the Virginia barrier islands
- 3:00 PM **Erwin, R. M.**; Perry, J. E.; Orth, R. J.; Beck, R. A.: Restoration of waterbird habitats in the Chesapeake region: great expectations or Sisyphus revisited?
- 3:15 PM **McKay, L. B.**: Engaging the public in waterbird protection – science alone is not enough

## **COL-08: Innovative Technological Applications for Science and Management in the Basin**

Chair(s): M. Trice, C. Heyer

Location: M2

- 8:15 AM **Heyer, C. J.**; Trice, T. M.; Michael, B. D.; Moore, K. A.; Reay, W. G.; Wilcox, D. J.: The use of innovative technologies to monitor and manage Chesapeake Bay water and habitat quality
- 8:30 AM **Bowers, H. A.**; Oldach, D. W.: Methods for detecting HAB species and their toxins in the Chesapeake Bay: an overview
- 8:45 AM Giordano, S. D.; **Levin, D. R.**; Lazar, J.V.: Benthic habitat characterization and mapping in support of Integrated Ecosystem Assessment for Chesapeake Bay
- 9:00 AM **Chekalyuk, A. M.**; Moore, K. A.; Hafez, M. A.: Shipboard and airborne advanced laser biomonitoring in the Chesapeake Bay and adjacent aquatic areas
- 9:15 AM **Stilwell, D. J.**: Adaptive sampling in the Chesapeake Bay with autonomous underwater vehicles

- 9:30 AM **Buckley, E. N.**; Tenore, K. R.: Retooling IOOS: transitioning technology innovations into operational applications

## **COL-09: Managing the Bay: Meeting the Mandates of Chesapeake 2000**

Chair(s): R. Batiuk

Location: M2

- 10:15 AM **Batiuk, R. A.**: 1975-2000: scientific, management and restoration events leading up to the Chesapeake 2000 Agreement
- 10:30 AM **Townsend, H. M.**; Wood, R. J.; Christensen, V.: Exploring management policy options for menhaden and striped bass using the Chesapeake Bay Fisheries Ecosystem Model based on the Ecopath with Ecosim Software
- 10:45 AM **Naylor, m. d.**: Meeting the Chesapeake 2000 submerged aquatic vegetation commitments
- 11:00 AM **Thompson, J. A.**: Scientific and management complexities of addressing invasive species in the Chesapeake Bay watershed
- 11:15 AM **Sweeney, J. S.**: Developing watershed strategies to meet the needs of estuarine living resources
- 11:30 AM **Shenk, K. E.**: Building new partnerships and new markets for agricultural animal manure and poultry litter in the Chesapeake Bay watershed
- 11:45 AM **Staver, K. W.**; McCoy, J. L.: Unreasonable expectations: lessons learned from a ten-year effort to reduce nitrogen losses from the Jarmin Branch watershed

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LUNCH 12noon - 2pm

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- 2:00 PM **Beaman, J. R.**; Eskin, R.: Water quality protection and restoration in the Chesapeake Bay: a Maryland perspective
- 2:15 PM **Daub, E. M.**; Batiuk, R.; Butt, A. J.; Hoffman, F. A.; Kennedy, J. M.; Pollock, A. E.: Development of Virginia water quality standards related to nutrients in the Chesapeake Bay and its tidal tributaries
- 2:30 PM **Hoffman, F. A.**; Butt, A. J.; Daub, E. M.: Development of chlorophyll *a* water quality standards for the James River, VA., part 1: the algal related impairments
- 2:45 PM **Butt, A. J.**; Daub, E. M.; Hoffman, F. A.; Batiuk, R.: Development of chlorophyll *a* water quality standards for James River, VA part 2: determination of numeric criteria
- 3:00 PM **Claggett, P. R.**; Bisland, C.: Coping with the tyranny of small decisions: using regional analyses to inform land management decisions at multiple scales

- 3:15 PM **Allen, G. W.**: Prioritizing toxics reductions in the Chesapeake Bay
- 3:30 PM **Breitburg, D.**; Nice, A.; Adamack, A.; Fulford, R.; Lipton, D.; Lung, W.; Jordan, T.; Weller, D.; Rose, K.: The importance of scale and location to the ecological and economic benefits of restoration

## **COL-11: Basin Eutrophication and Public Health**

Chair(s): L. Grattan

Location: M3

- 8:30 AM **Matuszak, D.**: Public health surveillance and the Chesapeake Bay
- 8:45 AM **Baier-Anderson, C.**; Squibb, K.: The risk assessment paradigm and its application to predicting human health effects of harmful algal blooms
- 9:00 AM **Grattan, L. M.**; Hill, J.; Dowd, E.; Tracy, K.; Morris, J. G.: Environmental worry and risk perception for estuary related illnesses
- 9:15 AM **Oldach, D. W.**; Bowers, H. A.; Morris, J. G.: Use of molecular probes in assessing human health events linked to HAB species
- 9:30 AM **Simon, N. S.**: Loosely bound oxytetracycline in riverine sediments from two tributaries of the Chesapeake Bay, USA

## **COL-12: Harmful Algal Blooms in the Chesapeake Bay and Coastal Bays**

Chair(s): P. Glibert

Location: M3

- 10:15 AM **Marshall, H. G.**; Egerton, T.; Burchardt, L.: A review of the harmful algal populations in Chesapeake Bay
- 10:30 AM **Glibert, P. M.**: HABs and eutrophication – a synthesis
- 10:45 AM **Mulholland, M. R.**; Watson, A. M.; Rocha, A.; Bernhardt, P. W.: Nutritional flexibility of algal mixotrophs in the Chesapeake and Coastal Bays
- 11:00 AM **Place, A. R.**; Bachvaroff, T. T.; Adolf, J. E.: *Karlodinium micrum* – the Bay's other toxic dinoflagellate
- 11:15 AM **Burkholder, J. M.**; Gordon, A. S.; Marshall, H. G.; Moeller, P. D.; Coyne, K. J.; Lewitus, A. J.; Law, J. M.: Variable toxicity of strains of *Pfiesteria* spp. to fish and mammalian cells: influences of assay techniques and culturing methods
- 11:30 AM **Brown, C. W.**; Ramers, D. L.; Gross, T. F.; Hood, R. R.; Tango, P. J.: Nowcasting the relative abundance of the ichthyotoxic dinoflagellate *Karlodinium micrum* in Chesapeake Bay

- 11:45 AM **Donato, T. F.**; Hamdan, L. J.; Osburn, C. L.; Maness, S. J.: Multispectral and hyperspectral observations and characterization of *Microcystis* blooms in the tidal Potomac River

### **COL-13: New Understandings in HABs and Other Plankton, Benthos and Nekton from the Chesapeake**

Chair(s): D. Stoecker

Location: M3

- 2:00 PM **Wazniak, C.**; Hall, M.; Tango, P.; Sturgis, B.: Interannual variability of brown tide, *Aureococcus anophagefferens*, blooms in the Maryland coastal bays
- 2:15 PM **Boneillo, G. E.**; Mulholland, M. R.; Bernhardt, P. W.: Interannual differences in nutrient dynamics during a brown tide (*Aureococcus anophagefferens*) bloom

- 2:30 PM **Hamdan, L. J.**; Boyd, T. J.; Osburn, C. L.; Jonas, R. B.: The role of phytoplankton production and bacterioplankton metabolism of autochthonous DOC in the development of seasonal hypoxia in the Chesapeake Bay

- 2:45 PM **Johnson, J. M.**; Buchanan, C.: Phytoplankton species diversity in different water quality conditions in Chesapeake Bay

- 3:00 PM **Crump, B. C.**; Peranteau, C.; Beckingham, B.; Cornwell, J. C.: Estuarine bacterioplankton metabolism and community composition across a seasonal oxygen gradient

- 3:15 PM **Diaz, J.**: Benthic-pelagic coupling and dissolved oxygen dynamics

### **COL-14: Ecosystem-Based Approaches to Management and Restoration of Estuarine Fisheries**

Chair(s): M. Luckenbach

Location: M2

- 4:15 PM **Latour, R. J.**; Gartland, J.; Bonzek, C. E.: Do the stomach contents of striped bass and weakfish suggest 'localized depletion' of Atlantic menhaden in Chesapeake Bay?
- 4:30 PM **Lipcius, R.**: Ecosystem-based restoration of the blue crab and eastern oyster
- 4:45 PM **Paynter, K. T.**; Meritt, D.: Oyster restoration In the Maryland portion of Chesapeake Bay
- 5:00 PM **Fulford, R. S.**; Breitburg, D. L.; Newell, R. I.; Luckenbach, M.: Planning oyster population recovery from an ecological perspective: where should we put them and why?

- 5:15 PM **Christensen, V.**; Martell, S.; Walters, C. J.; Townsend, H.: Towards ecosystem-based management in the Chesapeake Bay: linking estuarine processes and fisheries trophic interaction through complementary modeling efforts

### **COL-15: Basin Modeling for Research and Management**

Chair(s): R. Hood, T. Gross

Location: M4

- 8:15 AM **Gross, T. F.**; Hood, R. R.: Building a Chesapeake Research Community through open source modeling
- 8:45 AM **North, E. W.**; Chen, S.; Hood, R. R.; Shi, F.; Sanford, L. P.; Kirby, J. T.; Koch, E. W.; Newell, R. I.: Understanding the effects of oyster reefs and breakwaters on seagrass habitat: an open-source modeling approach
- 9:00 AM **Liddel, M. K.**; Paynter, K. T.; Christman, M. C.: A dynamic model for oyster restoration in Chesapeake Bay
- 9:15 AM **Xu, J.**; Hood, R. R.: Modeling biogeochemical cycles in Chesapeake Bay with a coupled physical-biological model of Chesapeake Bay: development, validation and improvement
- 9:30 AM **Li, M.**; Zhong, L.; Hood, R. R.; Harding, L. W.: Simulating seasonal and interannual variations of plankton populations in the Chesapeake Bay using a new biophysical model

BREAK 9:45am - 10:15am

- 10:15 AM **Scavia, D.**; Kelly, E.; Hagy, J.: A simple model for assessing the response of Chesapeake Bay hypoxia to nitrogen loads
- 10:30 AM **Hood, R. R.**; Brown, C. W.; Gross, T. F.; Decker, M. B.; Purcell, J. E.: Modeling interannual variability in sea nettle (*Chrysaora quinquecirrha*) populations in Chesapeake Bay
- 10:45 AM **Sisson, G. M.**; Wang, H.V.; Li, Y.; Shen, J.: An integrated approach toward a comprehensive restoration plan for a shallow water system in the Lynnhaven Inlet
- 11:00 AM **Lanerolle, L.**; Gross, T.; Hood, R.; Xu, J.: Coupled high resolution ROMS application for simulation of hypoxic zones in the Chesapeake Bay
- 11:15 AM **Duffy, C. J.**: Integrated river basin modeling: a multi-scale, multi-process strategy
- 11:30 AM **Brakebill, J. W.**; Preston, S. D.: Applications of a spatially referenced regression model in the Chesapeake Bay watershed

11:45 AM **Shenk, G. W.**; Linker, L. C.; Wu, J.: Automated calibration of the Chesapeake Bay Program's hydrologic watershed model

### **COL-16: Identifying Priorities for Legislative and Executive Activity in Basin Restoration**

Chair(s): W. A. Stiles

Location: M4

2:00 PM **Preston, S. D.**: Monitoring to support the assessment of water-quality criteria and designated use attainment in Chesapeake Bay tidal waters

2:15 PM **Pease, J. W.**: Achieving nutrient reductions from agricultural nonpoint sources

2:30 PM **Stiles, W. A.**: Fragmented regulatory authorities frustrate comprehensive approaches to restoration

2:45 PM **Paul, R. W.**: Using water quality data and public activism to influence local land use decisions and to protect the St. Mary's River

3:00 PM **Burke, M.**: Growth and failure, natural designs and success

### **COL-17: Innovation in Agriculture Conservation for the Chesapeake Bay**

Chair(s): C. Musgrove

Location: M3

4:15 PM **Staver, K. W.**: Does the strategy match the science: what we know after 20 years of trying to reduce nutrient losses from coastal plain cropland

4:30 PM **Meisinger, J. J.**: Principles for managing nitrogen leaching

4:45 PM **Graves, R. E.**; Abdalla, C. W.: Science, engineering and policy for animal waste management in the Chesapeake watershed

5:00 PM **Kohn, R. A.**; Dou, Z.: Improving nutrient utilization by dairy cattle to reduce nutrient losses to water resources

5:15 PM **Collins, A.**; Basden, T.: Moving poultry litter out of nutrient overloaded watersheds in West Virginia

5:30 PM **Simpson, T. W.**; Korcak, R.; Musgrove, C.: Ponderable points: changing agricultural systems to provide environmental benefits

### **COL-18: The Importance of Non-Tidal Lands and Waters in Basin Dynamics**

Chair(s): R. Brooks

Location: M4

4:15 PM **Denver, J. M.**; Ator, S. W.: Hydrogeologic and geochemical factors affecting the transport of nutrients in nontidal coastal plain watersheds of the Chesapeake Bay

4:30 PM **Weller, D. E.**; Baker, M. E.; King, R. S.; Jordan, T. E.: Effects of land cover on aquatic systems: does spatial arrangement matter?

4:45 PM **Havens, K. J.**; O'Brien, D.; Stanhope, D.; Angstadt, K.; Schatt, D.; Hershner, C.: Headwater wetlands and their importance in the landscape

5:00 PM **Rheinhardt, R. D.**; Brinson, M. M.; Christian, R. R.; Miller, K. H.; Meyer, G. F.: Using indicators of riparian condition to assess water quality of stream reaches and watersheds

5:15 PM **Brooks, R. P.**; Brinson, M. M.; Easterling, M. M.; Rheinhardt, R.; Bishop, J. A.; Havens, K.; O'Brien, D.; Armstrong, B.; Hite, J.; Rubbo, J. M.: Stream, Wetland, Riparian Condition Index (SWRCI) for evaluating watersheds contributing to estuaries

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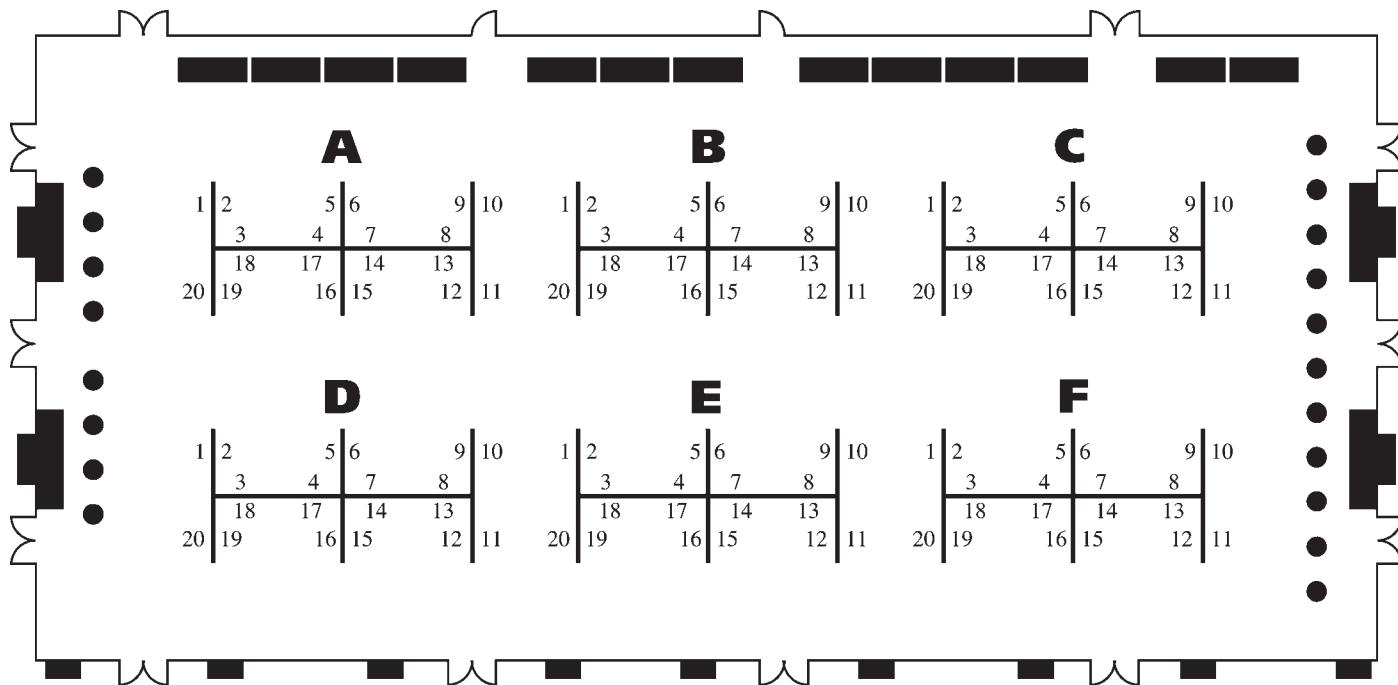
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# Poster Position Map



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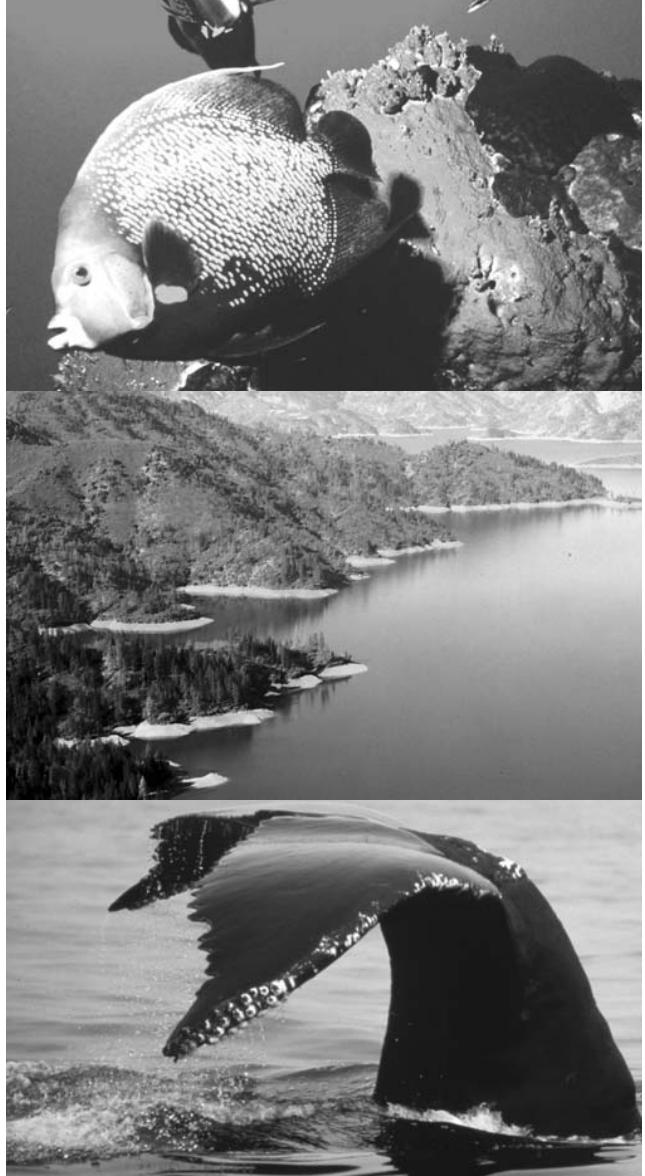
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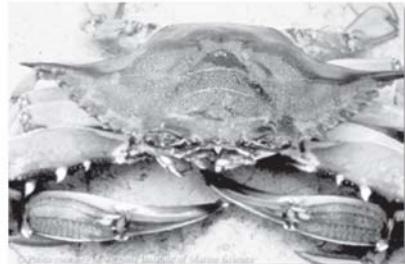
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# Map - Downtown Norfolk

## Downtown Norfolk

### Attractions

- 1 American Rover Tall Ship Cruises
- 2 Armed Forces Memorial
- 3 Battleship Wisconsin
- 4 Carrie B. Harbor Tours
- 5 Cannonball Trail
- 6 Chrysler Museum of Art
- 7 Cruise Ship Dock – Nauticus Pier
- 8 d'Art Center
- 8 d'Art Center at the Selden Arcade (Future Location)
- 9 Fort Norfolk
- 10 Freemason Historic District
- 11 The MacArthur Memorial
- 12 Hampton Roads Naval Museum
- 13 Hunter House Victorian Museum
- 14 Martin Luther King Monument
- 15 Moses Myers House
- 16 Nauticus, The National Maritime Center
- 17 Norfolk Trolley Tour
- 18 Pagoda and Garden
- 19 St. Paul's Episcopal Church
- 20 Spirit of Norfolk
- 21 Stockley Gardens
- 22 Town Point Park
- 23 Tugboat Museum
- 24 Victory Rover Naval Base Cruises
- 25 Waterside Festival Marketplace
- 26 West Point Monument
- 27 Willoughby-Baylor House/ Norfolk History Museum
- 28 Windows On History

### Performing Arts

- 29 Chrysler Hall
- 30 Attucks Theatre
- 31 Jeanne and George Roper Performing Arts Center
- 32 The NorVa
- 33 Harrison Opera House
- 34 Wells Theatre

### Sports

- 35 Norfolk Scope
- 36 Harbor Park

### Shopping

- 37 MacArthur Center
- 38 Ghent Shopping & Antique Stores

### Visitor Information Center

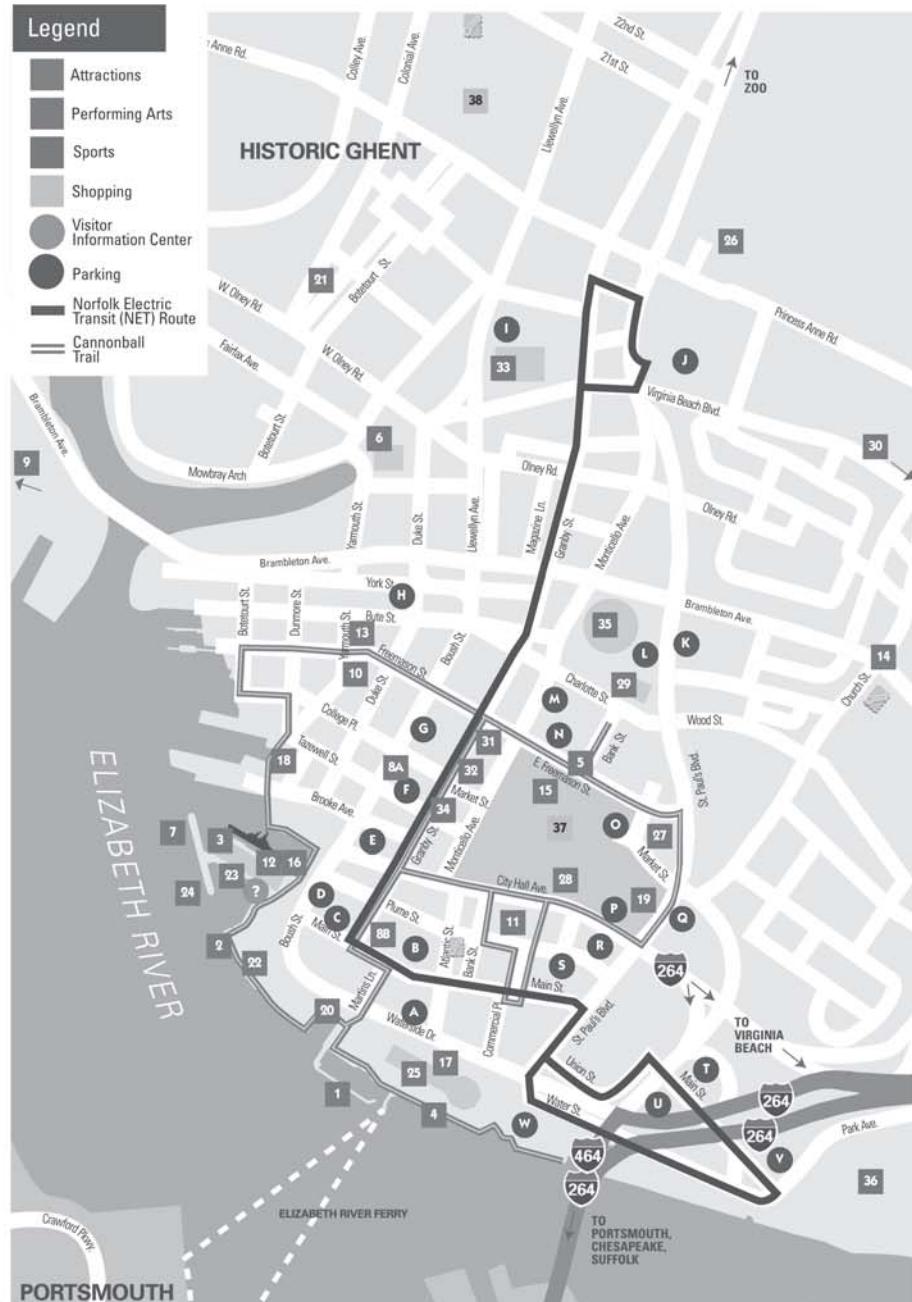
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### Post Office



### Legend

- Attractions
- Performing Arts
- Sports
- Shopping
- Visitor Information Center
- Parking
- Norfolk Electric Transit (NET) Route
- Cannonball Trail



### DOWNTOWN PARKING

- A Waterside Garage
- B Main Street Garage
- C Town Point Garage
- D West Plume Street Garage
- E Boush Street Garage
- F Tazewell Lot
- G Freemason Street Garage\*

H York Street Garage

I Harrison Opera House Lot

J Cedar Grove Lot

K Brambleton Lot

L Scope Garage

M Monticello Lot

N Monticello Avenue Garage

O MacArthur North Garage

P MacArthur South Garage

Q Education Lot

R Plume Street Lot

S Commercial Place Garage

T City Hall Garage North

U City Hall Garage South

V Harbor Park

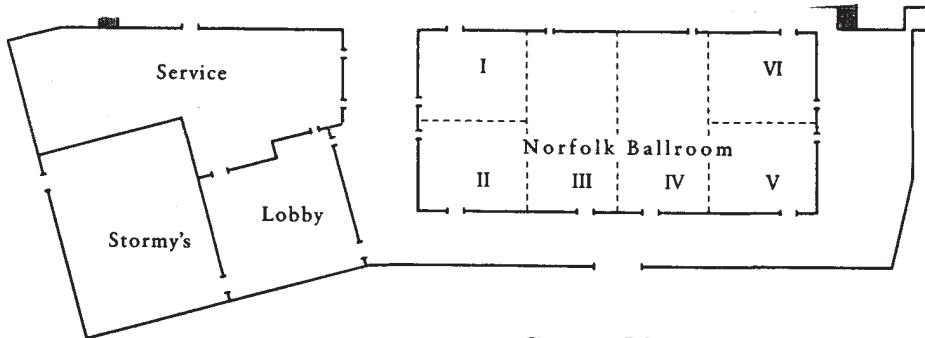
W Dominion Tower

\*Closed for construction, reopens 2005

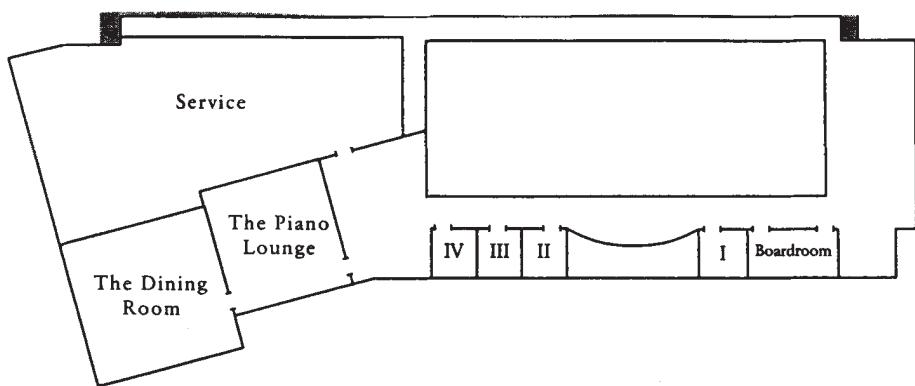
[www.norfolkcvb.com](http://www.norfolkcvb.com) 1-800-368-3097

# Map - Marriott Waterside Convention Center

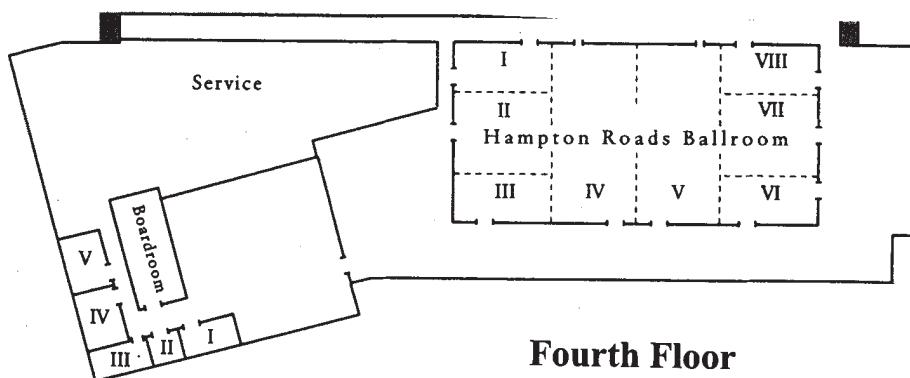
## First Floor



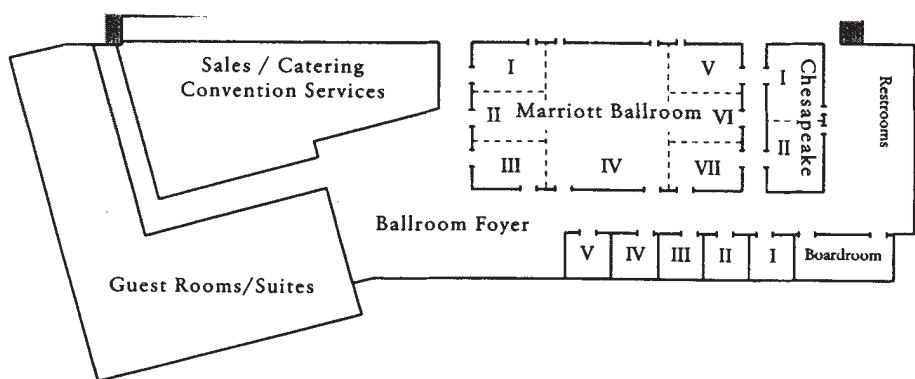
## Second Floor



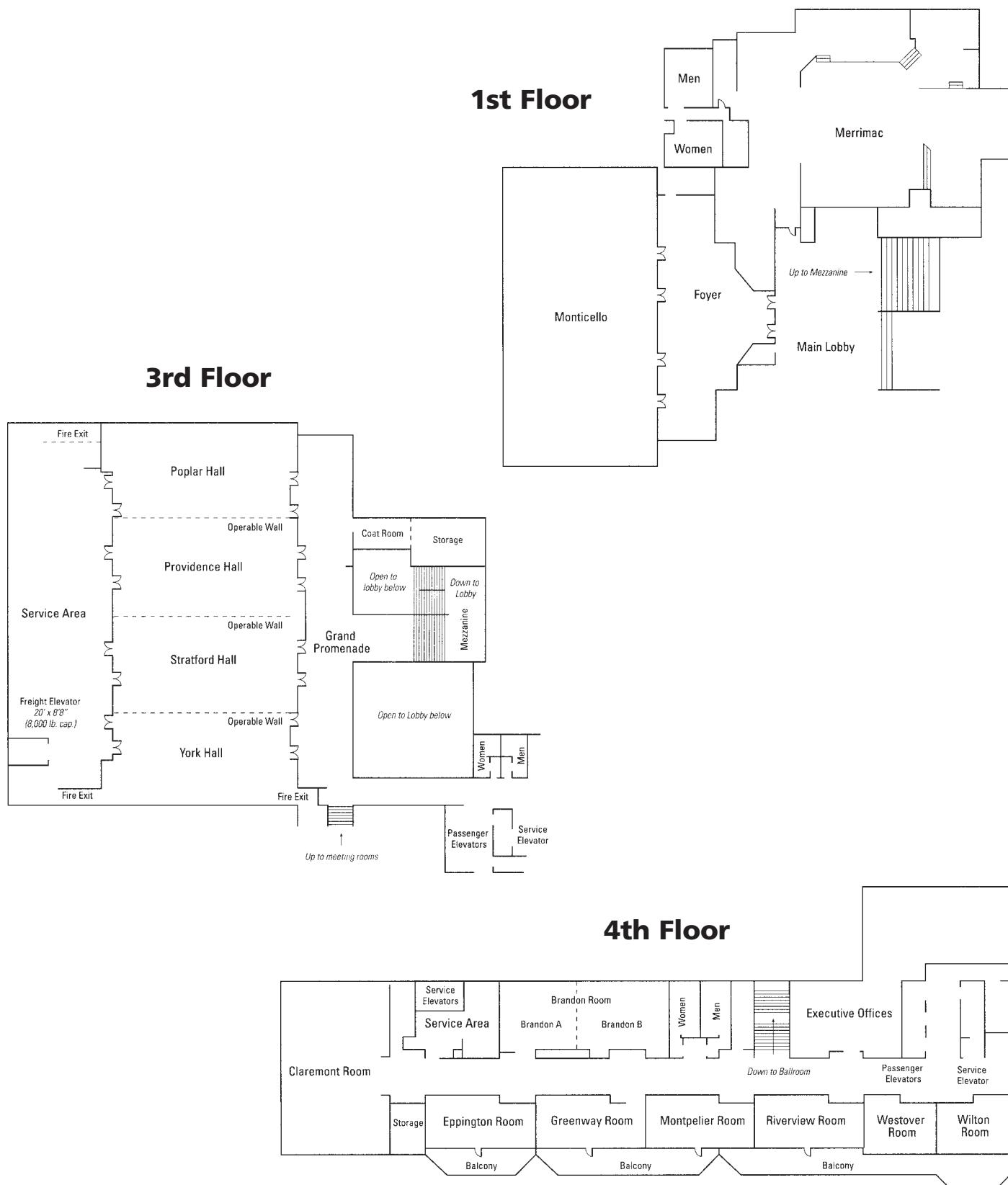
## Third Floor



## Fourth Floor



# Map - Sheraton Norfolk Waterside Hotel





## **Future ERF Biennial Conference Dates**

**November 4-8, 2007...Providence, Rhode Island**

Jim Latimer and Giancarlo Cicchetti, Co-Chairs

**November 2009....Portland, Oregon**

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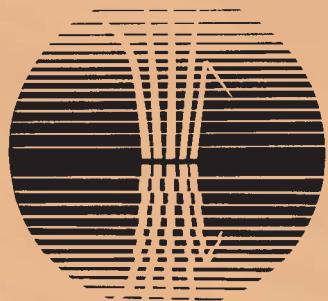
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