



TCS22 Shifting Shorelines: Adapting to the Future
June 13-16, 2010 in Wilmington, NC
Registration Now Open, Early Bird Registration until May 18
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<http://thecoastalsociety.org/?page=conference>

Tool Duo Helps Coastal Partners Tackle Flood-Related Risks

By Kitty Fahey

As climate change brings greater risks of flooding and other hazards, coastal managers are called upon to work with local officials, stakeholders, institutions, and the private sector on readiness and resilience plans. But how do these partners begin the process of pinpointing local flood-related risks, communicating those risks, and preparing resilience action steps?

Two new products, Coastal County Snapshots and the Coastal Inundation Toolkit, can be employed separately or in tandem to help coastal communities find answers to those questions. Using the NOAA Coastal Services Center’s Coastal County Snapshots (at www.csc.noaa.gov/digitalcoast/tools/snapshots/), county officials and their constituents can instantly access the following hazards information and resources:

- Locate important facts about exposure to flooding for coastal counties in the lower 48 states and Hawaii—statistics include the number of people, number of critical facilities, and percentage of developed land within the flood zone
- Compare hazard risk statistics of counties for regional analysis
- Learn to conduct risk assessments for hazards and climate change
- Acquire local snapshot facts via printed

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Survey of Some Marine Spatial Planning Resources

By Ellen Gordon

It’s a hectic time in the realm of Marine Spatial Planning (MSP) right now. The comment period has closed on the U.S. Interim Framework for Effective Coastal and Marine Spatial Planning (CMSP), released by the Interagency Ocean Policy Task Force in mid-December, 2009. As described in the introduction, “Coastal and marine spatial planning is one of the nine priority objectives proposed in the Interim Report of the Interagency Ocean Policy Task Force of September 10, 2009. This framework for CMSP in the United States provides a definition of CMSP, identifies the reasons for engaging in CMSP, and describes its geographic scope. It articulates national CMSP goals and guiding principals that would be regional in scope and developed cooperatively among Federal, State, tribal, local authorities and regional governance structures, with substantial stakeholder and public input.” The report can be found at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interimreport> The final report will not be released until later this spring; having received well over a thousand comments, the Task Force has some work to do. With remarks coming from scientists and planners, environmental organizations like Friends of the Earth and Sierra Club, trade associa-

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Dear Friends and Colleagues:

The 22nd International Conference of The Coastal Society is just around the corner and the timing couldn't be better. We are in the most exciting and challenging time for coastal and ocean policy that our nation has experienced since passage of the Coastal Zone Management Act in 1971. Development of a comprehensive Great Lakes, Coasts and Oceans National Policy is well underway, and Marine Spatial Planning--a powerful tool for sorting out appropriate uses (or not) of our coastal and ocean waters--is likely to be a cornerstone of that effort. Yes it's very exciting, but there is a real urgency to see it become a reality because it is all set against a backdrop of climate change impacts that are posing new threats to the resiliency of our coasts and estuaries. It's no coincidence therefore, that the theme of TCS22 is Shifting Shorelines: Adapting to the Future. It is our deliberate intention to provide a thought-provoking forum that brings these important issues, and many more to the forefront of discussion as conference participants convene to listen, share ideas, debate issues, and leave better-informed for making critical decisions. Since the very first conference in 1975, ironically titled, The Present and Future of Coasts, TCS has successfully engaged the coastal and ocean management community in forward-thinking dialogue that has often led to new and emerging management strategies for our coasts.

Planning and organizing a TCS conference is a huge amount of work, and considering that most of it is done with volunteers, it is quite a remarkable accomplishment. Under the skilled leadership of conference Co-Chairs Lisa Schiavinato (North Carolina Sea Grant) and Todd Miller (North Carolina Coastal Federation), TCS22 will not disappoint. This year we have an exceptional blend of field sessions, two thought-provoking plenary sessions, social gatherings and professional networking opportunities. The TCS22 program is shaping up to have the strongest content ever, thanks to our Program Chair, Patrick Lawrence (University of Toledo). I invite you to take a few minutes and read a more detailed description of the many offerings at TCS22, beginning on page 12 of this issue.

No question about it, Wilmington, NC is the place to be June 13-16 for TCS22! I look forward to seeing you all there, and I encourage you to register early.

Best Regards,

Jeff Benoit
TCS President

Orange Cup coral Credit:Nhobgood

The views expressed herein are those of the authors and do not necessarily represent TCS nor its Board.

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PDF and discover practical steps communities can take to become more resilient

The Coastal Inundation Toolkit (at www.csc.noaa.gov/digitalcoast/inundation/)—created by the Digital Coast Partnership and supported by the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems—enables users to deepen their knowledge of local inundation risks in the following ways:

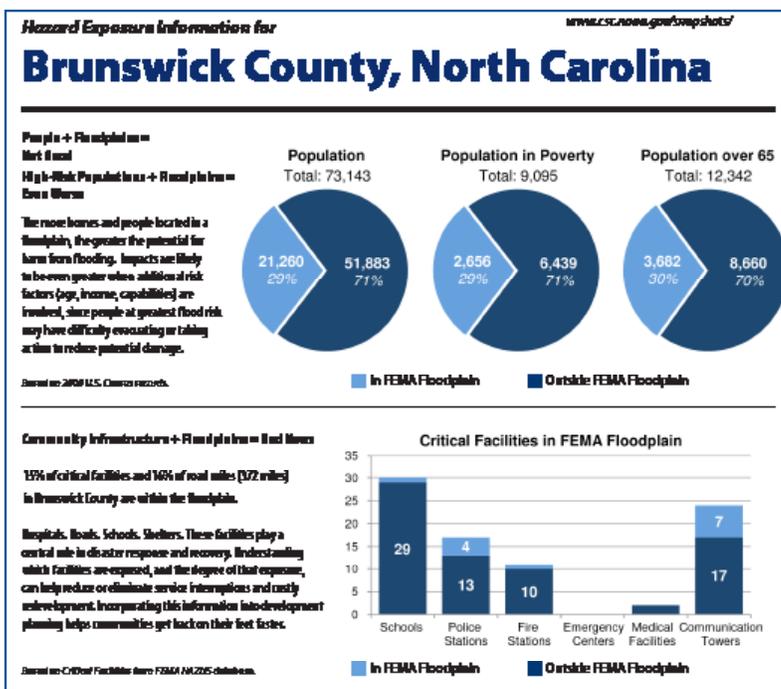
- Understand basic information about coastal inundation
- Identify any coastal county’s exposure to inundation
- Map inundation to “see” potential impacts
- Assess community risks, vulnerabilities, and resilience
- Communicate risk strategies to initiate change
- Discover how other communities are addressing coastal inundation



Potential inundation in Charleston, SC from shallow coastal flooding, with and without sea level rise: The map shows the scale of potential flooding, not the exact location, does not account for erosion or subsidence, and assumes no wind, rainfall, or future construction. The dark blue line shows the existing coast; the deep blue illustrates extent of flooding at current sea levels, during a 7 ft MLLW tide; the lighter blue areas show flooding extent during a 7 ft MLLW tide if sea level were to rise 1.6 ft, which could occur during the next 100 years.

According to William Brooks, a spatial analyst at the Center, the two online resources can be used in complementary ways. “Coastal County Snapshots allows coastal managers and community officials to get a quick picture of local risk factors for inundation and other hazards. For some users, the facts on Coastal County Snapshots will whet their appetite for more in the way of risk and resilience tools, and that’s when they’ll turn to the Coastal Inundation Toolkit.”

Both tools were developed to meet the needs of agencies and organizations with limited resources but growing responsibilities to lessen the harmful consequences of coastal inundation, storm surge and sea level rise. “County officials have a huge need for data and information, but they don’t often have a geographic information system (GIS) specialist on hand to interpret that information,” says Lori Cary-Kothera, another spatial analyst at the Center. “In Coastal County Snapshots, GIS information is shown in easy-to-understand charts and descriptions, and it reflects the statistics that county officials tell us they need—for instance, the percentage of vulnerable populations living within the floodplain.”



The NOAA Coastal Services Center tool Coastal County Snapshots provides local officials and coastal managers with a quick look at a county’s demographics, infrastructure, and environment within the flood zone. A map and pull-down menus let users pick the county of interest, and a report is provided for download that can be saved or printed. The easy-to-use format makes the Coastal County Snapshots a great learning and communications tool for local officials and their constituents

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CanVis, available through the Coastal Inundation Toolkit, is a visualization program used to 'see' potential impacts from coastal development or sea level rise. Users can download background pictures and insert the objects (hotel, house, marina, or other objects) of their choosing. The software is used by municipalities to brainstorm new ideas and policies, undertake project planning, and make presentations. CanVis was developed by the U.S. Department of Agriculture's National Agroforestry Center. The NOAA Coastal Services Center expanded the tool to include coastal objects. In the illustrated case, you see a home in a quiet coastal area and then how that scene would look if residents were allowed to add a seawall at the coastal edge.

Concerns about inundation are commonly shared by all six Digital Coast partners: The Nature Conservancy, Coastal States Organization, National Association of Counties, National States Geographic Information Council, Association of State Floodplain Managers, and NOAA Coastal Services Center. The partners wanted the Coastal Inundation Toolkit to be accessible to a wide range of users with varying needs and technical skills. Each tab on the toolkit home page—Understand, Identify, Map, Assess, Communicate, Discover—links directly to a targeted need, while the other tabs present the opportunity to learn more.

Mix and Match Applications

Allison Hardin has a great perch from which to view the handiness of both Coastal County Snapshots and the Coastal Inundation Toolkit. A planner for the City of Myrtle Beach, South Carolina, she serves as a co-chair of the Coastal Issues Committee for the Association of State Floodplain Managers, a member of the Digital Coast Partnership. "People in so many disciplines need to keep up with developments in floodplain and risk management, as well as disaster mitigation—not just planners but emergency managers, builders, and people who set building standards and regulations," says Hardin. "These tools can also be used for future land use planning. Just think of the millions in disaster-related costs communities could save, simply by knowing which areas are risky before they decide to build," she adds.

The tools can be used in tandem. "Let's say a planner uses Coastal County Snapshots and finds out that a large amount of the county's floodplain is developed," says

Hardin. "This person wants to preserve the floodplain's water absorption capacities while still giving city officials the public spaces they want. The planner can go into the toolkit and use the visualization tool CanVis to illustrate a hiking trail through a local area. A trail system is a nice space for passive recreation while still saving marsh areas."

Hardin cites another example. "If town officials want to create a hazards evacuation plan, they can start by pressing the Infrastructure tab on Coastal County Snapshots, which shows how many fire stations, police stations, and other critical services are located in the county's floodplain. These officials can then use the toolkit to locate county flood zone maps and add layers of information that show where the critical services are and where higher-risk facilities, like nursing homes, are located. Now they can 'see' what sorts of emergency help are available to higher-risk facilities—and they can also 'see' which facilities are in the floodplain and should be evacuated first."

Kitty Fahey is with I.M. Systems Group at the NOAA Coastal Services Center, Charleston, SC. This article was adapted from the February/March 2010 issue of Coastal Connections, a newsletter produced by the NOAA Coastal Services Center for the coastal resource management community. The newsletter can be found at www.csc.noaa.gov/newsletter/



Deep-Sea Volcanoes Play Key Climate Role

A vast network of undersea volcanoes pumping out nutrient-rich water in the Southern Ocean plays a key role in soaking up large amounts of carbon dioxide, acting as a brake on climate change, scientists say.

A group of Australian and French scientists have shown for the first time that the volcanoes are a major source of iron that phytoplankton need to bloom and in the process soak up CO₂. Oceans absorb about a quarter of CO₂ generated by mankind from burning fossil fuels and deforestation, with the Southern Ocean between Australia and Antarctica, among the largest ocean "carbon sinks." Excerpted from a Reuters report by David Fogarty. <http://www.reuters.com/article/idUJSTRE-62E0QJ20100315>

Some See Clean Water Act Settlement Opening New Path to Greenhouse Gas Curbs

On March 11, 2010, The U.S. Environmental Protection Agency (EPA) settled a lawsuit by agreeing to use the Clean Water Act (CWA) to address ocean acidification, a move that some see as opening a side door to federal curbs on greenhouse gases that scientists link to problems in the marine environment. The settlement with the nonprofit Center for Biological Diversity (Center) directly addresses EPA's failure to require the state of Washington to list its marine waters as impaired by rising acidity. The deal requires EPA to begin a rulemaking aimed at helping states identify and address acidic coastal waters. The effort could lead to the first CWA effort to protect acidifying marine waters, a move the Center sees leading to restrictions on carbon dioxide emissions, just as the CWA led to regulation of air emissions of mercury and pollution that cause acid rain. States have taken steps to address rising acidity in lakes and streams, but the settlement represents the first time EPA has agreed to take on ocean acidity. The Center's legal complaint started in Washington state, but the group has petitioned every coastal state to address the issue.

In the settlement filed in the U.S. District Court in Seattle, EPA agreed to take public comment on: ocean acidity, ways states can determine if coastal waters are affected, and how states might regulate "total maximum daily loads" of pollutants linked to acidification. EPA must start the process by posting a notice in the Federal Register. The settlement requires the agency to decide how to proceed by November 15, 2010. The settlement does not force EPA and states to immediately list waters as impaired from acidification, or to begin regulations to address the issue. Rather, EPA must only develop guidance for states on the matter.

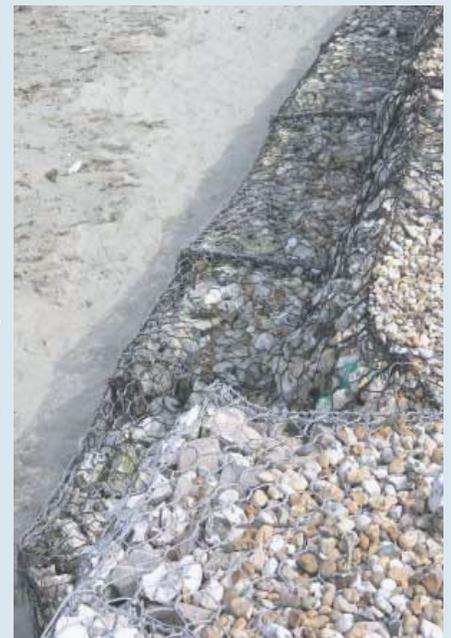
Excerpted from Greenwire. <http://www.nytimes.com/gwire/2010/03/12/12greenwire-some-see-clean-water-act-settlement-opening-new-4393.html>

Climate Report Includes Coastal Aspect

On November 25, 2009, the final report of the *Projection of Economic impacts of climate change in Sectors of the European union based on bottom-up Analysis* (PESETA) project was published. Titled, "Climate Change Impacts in Europe. Final Report PESETA Research Project," this effort by the European Commission's Joint Research Centre (JRC) integrates a set of high-resolution climate change projections and physical models into an economic modeling framework to quantify the impacts of climate change on vulnerable aspects of Europe. The European Coastal and Marine Union (EUCC) states that, "How Europe chooses to tackle the climate challenge over the next years will largely define our strategic role in the world." Excerpted from EUCC Coastal & Marine News. <http://www.eucc.net/en/news/CMN2010-01.pdf>

United Kingdom (UK): Sea Defense Needs Radical Rethinking

Rising sea levels and more storms could mean that parts of at-risk cities will need to be surrendered to protect homes and businesses, a report warns. The authors say that "radical thinking" is needed to develop sea defenses that can cope with the future threats. About 10 million people in England and Wales live in flood risk areas. The project, launched on January 15, is a joint venture between the Institution of Civil Engineers (ICE) and the Royal Institute of British Architects (RIBA). The report, *Facing Up To Rising Sea Levels*, urges the government, planning authorities and the public to act sooner rather than later. The project focuses on Kingston-upon-Hull and Portsmouth, two cities deemed among the most at-risk areas in the UK, and presents a series of six scenarios set up to 90 years in the future. Excerpted from BBC Science & Environment News, January 15, 2010 <http://news.bbc.co.uk/2/hi/science/>



Credit: West Sussex Gov, UK



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tions, fisheries groups, universities, museums, oil companies, ports, native American and Alaska Native associations, as well as “citizens,” “taxpayers,” “patriots,” “global citizens,” “a snorkeler” and “a salesman” (self-described affiliations), commentary spans the spectrum. 34 members of Congress signed a letter supporting the Interim Framework, and also urging, “an Executive Order from the President that formally establishes a national ocean policy, a means for coordinated implementation of that policy and an effective framework for coastal and marine spatial planning...” The Louisiana Governor’s office admonished the task force that “History is clear; the ‘top-down’ approach has proven ineffective in Louisiana as it relates to coastal and ocean sustainability.” View these comments and many more at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interimreport/comments>

There’s a wealth of discussion about MSP and many resources out there, much of it available on the Internet: The Marine Ecosystems and Management (MEAM) latest newsletter is not only devoted to MSP, including “Examining the Relationship between Marine Spatial Planning and EBM: Views from Three Planners,” it also includes accompanying editorials, and descriptions of other resources. <http://depts.washington.edu/meam/MEAM11.pdf>

The Surfrider Foundation take on the issue with this beginning, “It’s getting crowded out there in the ocean. No, we’re not talking about the lineup at your local

break. For centuries, the oceans have pretty much been regarded as the ultimate “wild west” where anything goes. But now we’re rapidly discovering that the ocean’s resources are not limitless, and that we can negatively affect conditions in the ocean and the viability of some “ocean uses” through the improper placement and implementation of other uses. There are several new proposed uses of the ocean (alternative energy projects, LNG facilities, aquaculture projects) that are in many cases competing for the same space or potentially impacting more traditional ocean activities, including commercial and recreational fishing, boating, shipping, recreation (swimming, surfing, diving, kayaking, etc.), and oil and gas exploration and production. And many uses are potentially in conflict with maintaining healthy ocean ecosystems, increasing the need to set aside networks of Marine Protected Areas. A logical response to these increasing demands on the ocean is to institute a planning process for the near-shore ocean (the state waters for each ocean coastal state) that is similar to land use planning that states, counties and cities engage in.” To read more: <http://www.surfrider.org/a-z/Marine-SpatialPlanning.php>

A Marine Spatial Planning toolkit developed by the Ecosystem Based Management (EBM)Tools Network summarizes the situation this way, “The health of marine ecosystems is declining, and use conflicts in the marine environment are increasing, in part because of new needs for ocean space for emerging industries such as wind and wave energy and aquaculture.” EBM defines

Marine Spatial Planning as a process for analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives. Find out more at <http://www.ebmtools.org/>.

The National Oceanic and Atmospheric Administration (NOAA) website, <http://www.msp.noaa.gov/> allows that there are a number of definitions for marine spatial planning, but specifies a similar definition to the EMB Tools Network, attributing it to the United Nations Educational, Scientific, and Cultural Organization, and concluding that the objectives [described in the paragraph above] have “usually have been specified through a political process.” NOAA recognizes that MSP, “is a rapidly evolving and dynamic topic area in which strong partnerships are essential.” The website provides much recent news on MSP developments, including links to:



Fishing © ARC Centre of Excellence for Coral Reef Studies/ Marine Photobank

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- the latest chapters of the Rhode Island Special Area Management Plan. <http://seagrant.gso.uri.edu/oceansamp/documents.html#statutes>
- A new marine bill passed by the Scottish parliament that includes requirements for a national marine plan to give greater clarity to decisionmaking in the marine environment and encourage further offshore investment. The bill also creates new powers to select and manage marine protected areas to enhance marine biodiversity and preserve historic assets. www.scotland.gov.uk/News/Releases/2010/02/04160830/
- A new report, "Marine Spatial Planning in the Nordic Region: Principles, Perspectives and Opportunities," that summarizes marine spatial planning concepts, describes planning tools, and offers several case studies. <http://bit.ly/bNo3hb>
- the Obama Administration's Fiscal Year 2011 Budget Request. For the first time in history, the official budget request from the White House includes funds targeted specifically to support marine spatial planning. www.whitehouse.gov/omb/budget/Overview/ and www.nytimes.com/gwire/2010/02/05/05greenwire-noaa-grant-proposal-could-launch-marine-zoning-54858.html
- A new report, "Marine Spatial Planning Stakeholder Analysis," which provides valuable information on the many audiences involved in coastal and marine spatial planning. www.csc.noaa.gov/publications/MSPStakeholderAnalysis.html
- An MSP bill introduced in Washington State to "augment the marine spatial component of existing plans and improve coordination among state agencies in the development and implementation of marine management plans." <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=6350&year=2009>
- Software available to link ocean ecosystems with relevant laws, Version 1.0 of the Management Identifying the Needs of Ocean Ecosystems (MINOE) is now available. MINOE was created to help interested parties (scholars, agency personnel, and others) identify the laws, regulations, and other management-related documents connected to a particular ecosystem. <http://minoe.stanford.edu/index.php>
- Massachusetts' final version of their Ocean Management Plan, the state's comprehensive marine spatial plan to protect marine resources and foster sustainable uses in state waters. http://www.mass.gov/?pageID=eoe_eaterminal&L=3&L0=Home&L1=Ocean+%26+Coastal+Management&L2=Massachusetts+Ocean+Plan&sid=Eoeea&b=terminalcontent&f=eea_oceans_mop&csid=Eoeea
- A new European Union project, "Monitoring and Evaluation of Spatially Managed Areas (MESMA)", a 12-country partnership with the goal of achieving optimized economic use of European ocean and coastal

areas along with healthy marine ecosystems. The MESMA project aims to produce integrated management tools for monitoring, evaluation, and implementation of spatially managed areas. www.mesma.org



Sealions: ©Marcia Moreno-Baez; Freighter and Artisanal Fishers ©Gerick Bergsma 2008; Diver with camera: ©Walcott Henry 2005 - Marine Photobank



UNIVERSITY OF DELAWARE

Students at the College of Earth, Ocean and Environment, University of Delaware (UD) are proud to announce the establishment of the UD Chapter of TCS! Formalized early this year, we don't have too much to report at this time, but we look forward to advancing the mission of TCS and joining this excellent network. Current activities are focused on expanding our membership, planning for the year ahead, and preparing for TCS22, where we hope to participate and collaborate with our colleagues. We are particularly excited to meet and converse with other students involved in chapters around the country, learn from your insights and invaluable experience in enhancing the value of student chapters, and participate in a united effort to address coastal issues!



TCS Duke graduate student members Lindsey Peavey, Carmen Yeung and Rhianna Stickland selling raffle tickets at the Neuse RIVERKEEPER Foundation's 7th Annual Taste of Coastal Carolina fundraiser. Photo Credit: Ben Best.

DUKE UNIVERSITY

Darwin Day at the NC Museum of Natural Sciences - February 12

The Duke Chapter sponsored the admission of eight TCS student members to the opening of the Museum of Natural Science's new "Megalodon: The Largest Shark That Ever Lived" exhibit, and a keynote lecture by shark expert and "Finding Nemo" advisor Adam Summers, Associate Director of Friday Harbor Laboratories, University of Washington who told us about sharks as inspiration for biomaterials design and how these ancient fishes swim fast and grow huge. Lecture title: "Big, Fast and Bulletproof: What one Biologist has Learned from 300 Million Years of Shark Evolution."

Hoop Pole Creek Cleanup - March 6

Eight Duke Marine Lab students and staff volunteered with the North Carolina Coastal Federation (NCCF) to clean up Bogue Banks and its surrounding waterways. Hoop Pole Creek, a unique 31-acre preserve located in Atlantic Beach, NC is a refuge and sanctuary for many local flora and fauna. This parcel of land was purchased in 1997 by the NCCF with a grant from the North Carolina Clean Water Management Trust Fund. Hoop Pole Creek is now one of the only undeveloped parcels of land left in Atlantic Beach and is used year-round for education, restoration and stewardship activities.

Taste of Carolina Coast - March 16

Six TCS student members volunteered for the Neuse RIVERKEEPER Foundation's annual fundraiser, where the community gathers to taste samples from local restaurants. The event was held at the Riverfront Convention

Center in New Bern, NC and boasted a cooking competition and silent auction. The event was sold out--an overwhelming success!

This spring we are kicking off our Clean Water Initiative. Projects and events will include:

1) *Muddy Water Watch - April 3*

To help protect local waterways, our Chapter is supporting the participation of 20 student TCS members in the Muddy Water Watch (MWW) training program. The training program is hosted by the North Carolina Riverkeepers network and is designed to empower citizens to protect their local waterways. Since runoff from construction sites is one of the largest sources of poor water quality in North Carolina, the training will educate participants about North Carolina's sediment and stormwater laws and requirements associated with construction activity. After completing the training, participants become regular MWW volunteers and help identify sedimentation and erosion violations from active construction sites.

2) *"Tapped" Screening - April 21 & 22*

The Duke TCS Student Chapter is teaming up with the Nicholas School's USGBC Student Chapter and the Duke Marine Lab's Green Wave sustainability group to host two free public screenings of the film Tapped. From the producers of Who Killed the Electric Car and I.O.U.S.A.,

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this timely documentary is a behind-the-scenes look into the unregulated and unseen world of an industry that aims to privatize and sell back the one resource that ought never to become a commodity: our water. From the plastic production to the ocean in which so many of these bottles end up, this inspiring documentary trails the path of the bottled water industry and the communities which were the unwitting chips on the table. Screenings will be open and advertised to students, faculty and the general public. We will give away free reusable, stainless steel water bottles fashioned with the TCS logo at each screening to discourage the purchase of plastic water bottles.

3) "Blue Drinks"

March 25 - Backstreet Bar & Grill, Beaufort, NC

April 15 - Marine Maritime Museum, Beaufort, NC

April 28 - Carteret Coastal Market, Morehead City, NC

To create networking opportunities among Duke students and staff, government agencies, NGOs, and other academic institutions, we are hosting several 'Blue Drinks' events in the Beaufort, NC-area. 'Blue Drinks' is very similar to 'Green Drinks' except our 'Blue Drinks' events have particular focus on coastal environmental issues. These events will allow TCS student members and other Duke students to make connections with working professionals in the environmental field and encourage collaboration for sustainability projects.

EAST CAROLINA UNIVERSITY

It has been a busy quarter for the East Carolina University chapter of TCS. While the officers have devoted considerable time to internal administrative activities at weekly meetings, they have also made a strong push to publicize the chapter and recruit new student members. Most notably, a chapter listserv and an ECU-TCS website have been created and will be used to recruit new members and inform existing members of news and upcoming events. Please visit us at: <http://www.ecu.edu/org/tcs>. The chapter gained seven new members through a recruit-

Coastal Management Journal

Be Sure to Use Your Members Link to Read the Latest Articles:

Why Don't Coastal Residents Choose to Evacuate for Hurricanes? by Daniel R. Petrolia and Sanjoy Bhattacharjee

Marine Protected Area Costs as "Beneficial" Fisheries Subsidies: A Global Evaluation by Sarika Cullis-Suzuki and Daniel Pauly

Developing MPA Effectiveness Indicators: Comparison Within and Across Stakeholder Groups and Communities by Marivic G. Pajaro, Monica E. Mulrennan, Jacqueline Alder and Amanda C. J. Vincent

Institutions Shaping Coastal Ecosystems: The Algarve Case by Andreas Thiel

Manatee Zone Compliance among Boaters in Florida by John S. Jett and Brijesh Thapa

ment event and now has monthly chapter meetings, each featuring a presentation of a member's research efforts. We also have established a new chapter Faculty Recognition Award and we will be sponsoring the TCS student luncheon at the biannual meeting in Wilmington, NC. We plan to silkscreen the accompanying sunset photograph by our chapter historian onto ECU-TCS totebags to complement our existing chapter t-shirts. It is an exciting time to be part of the ECU chapter of TCS and we look forward to new activities for the remainder of the year!



Photo credit: Deanna F. Swain



TCS Unwrapped: Did you Know?

By Tom Bigford

TCS would struggle to replicate the great theater of opening King Tut's tomb or unearthing an unknown literary work, but we can surely enjoy some measured excitement as we embark on an effort to review our own history. Last year, we satisfied a long-standing goal of preserving our TCS Bulletin by scanning every issue since the first in May 1976. On the horizon is another, loftier goal; to scan our proceedings dating back to TCS1 in San Diego in 1975.

This significant effort presupposes that more than 35 years of coastal history deserves to be preserved and that the contents will inform and enlighten. A secondary assumption is that it can be interesting, to all of us as members, coastal professionals and the general public, since we are a tax-exempt educational organization. With those hopes in mind, I offer this first glimpse of our own treasure trove:

- How and why was this Society established?
- Have the visions of our founders materialized as they thought, or have we charted new paths?
- How have key issues shifted during our 3+ decades.

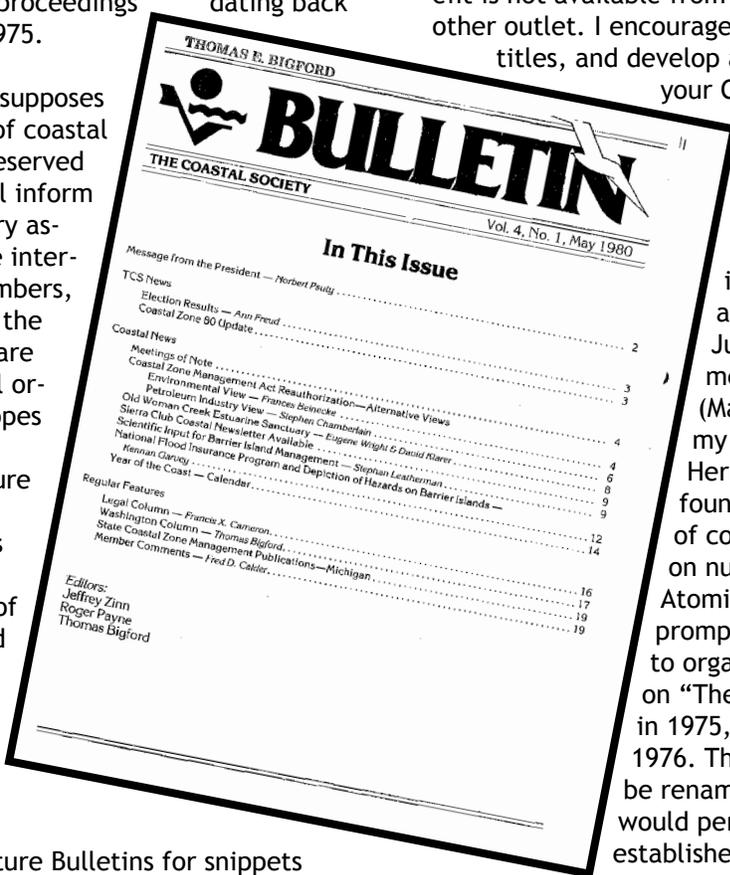
Look to this column in future Bulletins for snippets of the history we have established and the trends we have observed. Please let me know if you've got nagging questions about our past that you'd like to have answered.

Before sharing a few initial thoughts, I must thank two colleagues. First, where I work at NOAA Fisheries' Office of Habitat Conservation, I thank Nerie Canasa, who single-handedly scanned each issue. Nerie dedicated many hours to scanning 89 tattered Bulletins into our written archives. Since I have the only complete set of TCS Bulletins, our intention is to create an electronic catalog available to all members and the public. The second step in this process was to post each issue on

our website and provide a tool to enable searches across all issues. Long-time TCS Board member Laurie Jodice from Clemson University offered her considerable IT skills, and all issues are now online, complete with a list of the featured articles in each issue. Nerie and Laurie's efforts will make past TCS President and retired Virginia Institute of Marine Sciences professor Maurice Lynch smile. He often says our Bulletins and proceedings offer great educational tools when teaching future coastal professionals. I think their efforts will also be useful to our general membership and the public. This new benefit is not available from any other society, agency, or other outlet. I encourage you to open files, search article titles, and develop a new appreciation for all that your Coastal Society has done in the past 35 years.

As you might have detected, this effort to preserve all Bulletins has uncovered some interesting facts. With encouragement from Executive Director Judy Tucker, after she exchanged messages with our first President (Maurice "Herb" Schwartz), I had my own interesting exchanges with Herb. Did you know that TCS was founded after Herb noted an absence of coastal "voices" at public forums on nuclear power organized by the Atomic Energy Commission? That gap prompted a few coastal enthusiasts to organize the Society, convene TCS1 on "The Present and Future of Coasts" in 1975, and publish the first Bulletin in 1976. They thought the Bulletin might be renamed and wondered if the Society would persist, but both are now firmly established as coastal icons.

Another interesting trend is our record of female leaders, dating to Evelyn Pruitt as our first President in 1975. She has been followed by Virginia Tippie, Margaret Davidson, Megan Bailiff, and Kristen Fletcher. That trend continues next year when Lisa Schiavinato assumes the helm.



Tom Bigford has been a TCS member since 1976 and has served as Membership Committee chair and member, Secretary, Executive Director, conference chair, and Bulletin Editor during his membership. He has also hosted a series of TCS members as interns in his office at NOAA Fisheries Service. He can be contacted at thomas.bigford@noaa.gov.



ICCCM'10 International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean

April 11-17, 2010, Estoril, Cascais, Portugal
<http://icccm.dcea.fct.unl.pt>

International Symposium on Coastal Zones and Climate Change: Assessing the Impacts and Developing Adaptation Strategies

April 12-13, 2010, Churchill, Victoria, Australia
<http://www.monash.edu.au/cemo/czcc2010/>

3rd Annual Global Marine Renewable Energy Conference

April 14-15, 2010, Seattle, Washington
<http://www.globalmarinerenewable.com>

First International Conference on Island Sustainability

April 19-21, 2010, Brac Island, Croatia
<http://www.wessex.ac.uk/10-conferences/islands-2010.html>

**Monitoring from the Summit to the Sea
 7th National Conference of the National Water Quality Monitoring Council**

April 25-29, 2010, Denver, CO
<http://acwi.gov/monitoring/conference/2010/index.html>

**Fifth Global Conference on Oceans, Coasts and Islands
 Global Oceans Conference 2010; Advancing Integrated Ocean Governance at National, Regional, and Global Levels**

May 3-7, 2010, 9 UNESCO Paris, France
http://www.omrn-rrgo.ca/bulletinBoard/GOC2010_Flyer.pdf

4th World Ocean Network International Meeting

May 9-12, 2010, Boulogne-sur-Mer, France
http://www.worldoceannetwork.org/Events_RI4.asp

Coastal Zone Canada 2010

July 25-29, 2010, Charlottetown, Prince Edward Island, Canada
<http://www.gov.pe.ca/czc2010>

Littoral 2010: Adapting to Global Change at the Coast: Leadership, Innovation, and Investment

September 21-23, 2010, London, UK
<http://www.coastnet.org.uk/Littoral2010>

6th International Conference on Marine Wastewater Discharges and Coastal Environment

October 25-29, 2010, Langkawi, Malaysia
http://www.mwwd.org/site/page.asp?dsy_id=3331

XXIII International Coastal Conference: Coastal Evolution Studies: Traditions and Modern Concepts

October 5-9, 2010, St. Petersburg, RUSSIA
<http://www.rshu.ru/IOC50/>

1st World Small-Scale Fisheries Congress

October 18-22, 2010, Bangkok, Thailand
<http://www.seafdec.or.th/wsf2010/index.html>

Ecosystems 2010: Global Progress on Ecosystem-based Fisheries Management

November 8-11, 2010, Anchorage, AK
<http://seagrant.uaf.edu/conferences/2010/wakefield-ecosystems/index.php>

2nd International Symposium on Integrated Coastal Zone Management

July 3rd - 7th, 2011, Arendal, Norway
www.imr.no/iczm



Gerick Bergsma 2009 / Marine Photobank



**Please join us in Wilmington, North Carolina, June 13-16, 2010 for
The Coastal Society's 22nd International Conference,
"Shifting Shorelines: Adapting to the Future"**

TCS22 will focus on innovative ideas to address coastal issues by:

- Providing information, knowledge, activities and solutions relevant to solving contemporary coastal issues;
- Integrating science, management, policy and decision-making; and
- Presenting questions, ideas or case studies that encourage dialogue and sharing of solutions among conference participants.

Discover Solutions

The Coastal Society's biennial conference is one of the longest-running series of coastal conferences in the United States. TCS conferences provide a forum for interdisciplinary education and discussion on coastal issues. Speakers debate the different facets of issues during plenary sessions to create an awareness of needs among coastal resource managers and users, which ultimately lead to opportunities for innovative solutions. During 3 days of concurrent sessions, ocean and coastal professionals share their latest research and strategies, sparking new ideas. These sessions will be grouped into five themes:

Changing Shorelines
Climate Change
Coastal Economies
Coastal Environments
Sociopolitical Adaptation

TCS22 is the place to listen, discuss, ask questions and think about the application of knowledge gained to the future of the coasts.

Connect with Professionals

Hundreds of participants are expected to attend the **TCS22** conference in 2010, including policy-makers and decision-makers, state and federal ocean and coastal resource managers, local planners, academics from various disciplines, business and industry representatives, coastal engineers, consultants, teachers and graduate students. These coastal connections, which transcend geographic boundaries and professional disciplines, are made at the conference and often continue post-conference, enriching the information on which decisions about coastal resources are made.

Opening Plenary: *Towards a National Ocean Policy: Connections across the Land-Sea Boundary*

The Monday opening plenary will kick off the conference to inform and engage conference participants in discussion on the development of national-level U.S. ocean policy and how it can be a valuable tool for climate change adaptation. The plenary will explore the potential of an ecosystem-based planning and governance approach extending from the head of the coastal watershed to the limits of the U.S. EEZ, and through the lens of potential impacts related to global climate change, in particular sea level rise. The presentations will include global, national, regional and North Carolina perspectives.

Panelists include:

Dr. Mike Orbach, Duke University
Kristina Gjerde, High Seas Policy Advisor, International Union for the Conservation of Nature (invited)
Dr. Larry Crowder, Duke University
Dr. Douglas Rader, Environmental Defense Fund

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Closing Plenary: *Making the Connection: Translating Science into Coastal Policy*

The Wednesday closing plenary will conclude the conference with discussion of one of the most critical issues ocean and coastal managers face: how to strengthen the interface between scientists and managers. In order to be more effective at helping decision-makers such as legislators and policymakers make wise decisions about coastal management, the question becomes: how to leap from policy analysis to policy implementation? Join us at the conference's closing plenary for lively debate and discussion on how to make the connection.

Panelists include:

Dr. Charles "Pete" Peterson, University of North Carolina-Chapel Hill Institute for Marine Science and Vice-Chair, North Carolina Environmental Management Commission

Dr. William Hogarth, University of South Florida and former Director, National Marine Fisheries Service and North Carolina Division of Marine Fisheries

Dr. Betsi Beem, University of Sydney, Australia

With 3 evening receptions, deeply discounted rates for students (who can also take advantage of a "career opportunities" luncheon), and pre-conference workshops and field trips, there's a plethora of formal and informal activities for attendees.

The Coastal Society is continuing its Coastal Resource Recovery Fund initiative to contribute to coastal resource protection and restoration efforts. First begun in 2006 to assist areas devastated by hurricanes Katrina and Rita, the initiative is now directed toward efforts in the host state. TCS will be assisting the North Carolina Coastal Federation (NCCF) with their fund raising effort through the sale of tickets to a concert by the Coastal Cohorts on Tuesday, June 15 at 8 PM. NCCF is a non-profit organization focused on protecting and restoring the coast of North Carolina through education and habitat preservation and restoration.





Thanks to Two Terrific TCS Volunteers!

TCS is very proud to have begun the new decade with an exciting, redesigned website, www.thecoastalsociety.org. In today's fast-paced world, a website is an important tool for increasing an organization's visibility and effectiveness. We are so pleased to thank 2 talented and enthusiastic volunteers, Kevin McLean and Laurie Jodice for ours! In addition to updating the overall look-and-feel of the site, a custom content management system was developed, as well as a new membership sign-up form.

Kevin McLean joined TCS in May of 2009 and was interested in volunteering his design skills and web applications experience to assist TCS with our web needs. As an engineer developing web-based software, Kevin was motivated to join The Coastal Society for the opportunity it afforded him to learn more about coastal and wetlands issues, while allowing him to volunteer his skills in web development—a win-win situation! After meeting with TCS President Jeff Benoit in Arlington, Virginia, he discussed the current site layout and architecture with Laurie Jodice, who has been volunteering her time to oversee the site and manage the hosting duties since 2000.

Working with Laurie, Communications Committee Chair Helene Scalliet, Executive Director Judy Tucker and other TCS committees, many site issues were reviewed to develop a list of recommendations. While multiple design concepts were developed, the one chosen incorporates colors from the TCS logo and uses many coastal-themed photos from around the world. The new design showcases some of the environments that are integral to the TCS mission, as well as providing a visually interesting site to attract new members and others interested in coastal issues. Beyond just giving TCS a new look, however, a complete review of the original site content was conducted, and several rounds of revisions were completed to update the existing content.

Once the site content was migrated to the new design, a web-based content management system was developed so that existing and future updates could be completed through an online interface that uses html. This makes it simple for a volunteer with basic knowledge of html to edit the content. Laurie Jodice worked to develop detailed documentation on all aspects of the site as well as the content management system, ensuring that site maintenance is transferable and as straightforward as possible. She also helped to develop the new membership sign-up process, was integral in coordinating the

PayPal payment system and set up the online voting process for TCS elections and bylaws changes.

While many features and applications are still on the "to-do" list, the updated site has moved TCS one step closer to its online goals. Currently, TCS Bulletins dating back to 1976 have been scanned (by another volunteer; see TCS Unwrapped, in this issue) and have been posted to an online PDF archive.

Kevin hopes the site will attract others interested in coastal and wetlands issues as he is, and says he looks forward to working with Laurie Jodice, Sarah Young, Chris Ellis and the rest of the TCS web team on continually improving the site and its value to members. Kevin moved from Arlington, Virginia to Anchorage, Alaska in September of 2009 and currently provides web development services to various clients throughout North America.

Laurie is a research associate at the International Institute for Tourism Research and Development at Clemson University and a PhD candidate in the University's Dept of Forest and Natural Resources as well as a long-time TCS member. She organized TCS17 and published the conference proceedings and served as a Director on the TCS Board and the inaugural Cascadia Chapter. She tells us that she volunteers her time because she's motivated to contribute to the TCS mission to inform and assist coastal management professionals, many of whom are friends she made during TCS conferences or students she got to know well while working with the Marine Resource Management program at Oregon State University. Laurie says, "My career passion also focuses on training of professionals as a means to enhance innovation, creativity and consensus in the management of marine resources. So I believe the small things I do to help with communications, via the website, contribute to that goal." She adds, "And looking over the old newsletters while creating the archive is pretty cool, because I have gained a sense of the historical past of both coastal management and TCS, and the importance of TCS' role as a communicator and in professional development."

TCS, through its long history has been driven and guided by many, many dedicated volunteers. Maintaining an effective, meaningful organization takes many hours, many skills, and many hands. We welcome all efforts; please consider how you might volunteer and help us improve/expand/enhance our efforts.



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THE COASTAL SOCIETY MEMBERSHIP FORM

Name: _____
Last First Middle Initial

Organization: _____

Street: _____

City/State/Zip: _____

Country: _____

Home Address (if preferred mailing address): _____

Daytime Phone: _____ E-Mail: _____

Present Occupation: _____

Primary Interest: _____

TCS Chapter Affiliation (if any): _____

Sponsored/Referred by: _____

Type Membership (Check one):

• Regular, \$60 US	(professionals or interested citizens)
• New Professional, \$40 US	(out of school fewer than two years) Name of academic institution: Date of graduation:
• Retired, \$40 US	(over age 65 and retired from full time work) Date of retirement: Former employer:
• Student, \$20 US	(enrolled in a graduate, undergraduate or secondary level academic program) Academic advisor - Name: email:
• Library, \$50 US	(library)
• Institutional, \$250 US	(institution or organization; list two individuals' names and email addresses on form)
• Corporate, \$500 US	(company, business, or organization; list four individuals' names and email addresses on form)

Signature: _____ Today's Date: _____ Thank you!

Make check payable to The Coastal Society, and mail it with your application to: PO Box 3590, Williamsburg, VA 23185. To pay by credit card, please use the online application at: www.thecoastalsociety.org/membership2.html.