



If the Tide is Rising, Who Pays for the Ark?

By Robert Cutting & Lawrence Cahoon

Coastal managers are grappling with the real and immediate effects of sea level rise, which is accelerating due to global warming. States are already spending millions of dollars planning for sea level rise now and must take action soon in some areas, such as the Outer Banks of North Carolina. The Supreme Court cleared the way in *MA v. EPA* and the Environmental Protection Agency (EPA) has begun moving toward greenhouse gas regulation. Climate bills have been introduced but do not include true market trading nor address the issue of who pays for the costs and damages of global warming. Consequently the courts have also entered the fray.

Why the courts? While the executive and legislative branches could take action, courts are uniquely well- equipped to take evidence, and then reach objective, factual and legal conclusions. Once liability is found, the courts can then use creative devices such as continuing supervision, special masters, interim damages, bonding, and injunctions to assess real damages and apportion responsibility. Courts can even require bonding or insurance to secure future obligations. Some suggest that the courts are less subject to influence than Congress or the Executive. Several state Attorneys General, nongovernmental organizations and private parties argue in *Connecticut et al. v. AEC et al.* that defendants' power plants constitute a "public nuisance" that should be terminated by the court because defendants contribute 10% of U.S. anthropogenic greenhouse gas (GHG)

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Clean Energy and a Healthy Ocean: Navigating the Future Capitol Hill Ocean Week (CHOW) 2010

By Ellen Gordon

Long before the ongoing BP Deepwater Horizon spill exploded its way into the Gulf of Mexico, the CHOW 2010 theme had been selected; a focus on the intersection between ocean and energy issues, including the ocean's diverse abilities to supply energy through current and emerging technologies and the myriad ways in which energy production and consumption affect the ocean. But with the spill riveting the coastal and marine community's attention, CHOW 2010 was even more topical and timely. Panels considered issues ranging from national security concerns to socioeconomic and ecological impacts associated with our current energy mix, and explored alternative energy choices. Presentations covered policy, legal, regulatory, financial and infrastructure challenges in developing clean ocean energy sources.

Many who spoke, beginning with keynote speaker Interior Secretary Ken Salazar, referenced the impending National Ocean Policy. Although no one could say just when, everyone predicted its imminent release. The Secretary declared that we must "embrace a new energy future, because national security requires it, because our nation's economy needs it, but most importantly because the future of our planet demands it." He announced that the governors of 10 Atlantic coast states were developing a consortium with the Department of Interior (DOI) to advance offshore windpower, with a Memorandum of Understanding signed just

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So, what is in a name? Is it the Gulf of Mexico spill? Or the Deepwater Horizon spill? Or the BP spill? Or just that @#\$%&! spill? Whatever you call it, it's now entered its 3rd month of spewing. Destroying lives (11 died in the explosion) and livelihoods (fishermen, restaurateurs, marina owners to name just a few), devastating cultures (Vietnamese, Creole and Cajun) and damaging marine ecosystems, marshes and beaches, THE SPILL is ever-present. And the numbers: how many gallons per day really are gushing out? How many millions of dollars has BP spent so far? How much value has their stock lost? How many thousands of federal, state and local employees have been diverted from their regular jobs to play a role in the spill, whether efforts to understand its impacts, to stop it or to contain its consequences? How much marine life has died? Whether the spill is front-and-center in TCS members' lives, or just a constant hum in the background, it is something about which we are all hyper-aware. Though TCS 22 (June 13-16) stayed on its carefully planned tracks, the spill was part of our discussions. Capitol Hill Ocean Week 2010 (June 8-10) had long planned for a focus on energy and the ocean—the spill just made it an even hotter ticket. Meanwhile, other articles in this issue of the Bulletin address important related issues; the need to reauthorize the CZMA to strengthen states' ability to plan, prepare and respond to impacts from offshore energy development and a fascinating discussion of how to determine who's responsible for costs and damages of sea level rise.

If you were there at TCS22, you might enjoy the photo spread we've included, beginning on page 12; perhaps you'll find yourself in one of the photos. And if you weren't able to attend our biennial conference, the photos are just a small slice of what you missed!

For a summary of TCS activities in 2009, please be sure to head to our website to read the annual report at http://www.thecoastalsociety.org/pdf/annual_reports/annual_report_2009.pdf.

Ellen Gordon,
Editor TCS Bulletin



Gulf oil slick Credit: NOAA

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



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emissions. The plaintiffs allege that climate change impacts on coastal regions include: (1) sea level rise and its impacts (beach erosion, loss of private and public structures, relocation costs, loss of use and accompanying revenues, e.g., tourism, beach replenishment and armoring costs, impacts of flooding during high water events, and loss of tax base), as well as (2) enhanced storm frequency and intensity, and (3) increased insurance risks and costs.

The massive litigation over Hurricane Katrina (*Comer v. Murpy Oil*) adds more classes of defendants. The plaintiffs allege that defendants' energy, fossil fuel, and chemical industries in the U.S. emitted GHG that caused a rise in sea level and added to the ferocity of Hurricane Katrina, all of which combined to destroy the plaintiffs' private property, as well as public property. The Court of Appeals for the Fifth District ruled for the plaintiffs on nuisance and trespass issues in late 2009, but in March 2010 the full Court ordered re-hearing.

The Alaskan island Village of Kivalina (*Village of Kivalina v. ExxonMobil et al.*) alleges that it will be forced to relocate as a result of sea level rise. The physical change and monetary damages (\$400 million estimated) are underway, and the Village has a higher site selected. That case is on Appeal to the Ninth Circuit Court of Appeals.

A "public nuisance" is anything that is injurious to more than a few and that "unreasonably interferes with the use and enjoyment of property," such as smoke, unusual odors or crack houses. A trespass is more spatial and objective: invasion of private property boundaries—including airspace—by some material that is set in motion by the defendants constitutes a trespass if the material is visible (water, fires, storm damages) but since the Industrial Revolution, if invisible, the plaintiff must prove substantial injury. Courts in the U.S. can adapt these common law concepts to modern scientific knowledge without the concurrence of the other branches of government.

We argue that returning to historic protections for private property through the law of trespass protects people and property better than nuisance alone: (1) through an objective, spatial test rather than the more subjective tests of nuisance, and (2) because it reflects our modern understanding that invisible pollutants in fact

invade property, causing effects that may not be apparent for years (i.e., the general population is used as test subjects). Better accounting means polluters and their customers pay the true costs of production through a free market mechanism that is like a "green tax".

There are also U.S. Supreme Court findings that any government that permits pollution without accounting for these private damages has taken private property without just compensation, and would thus also be liable for damages. We argue that permitting invasion of public space similarly constitutes an unconstitutional gift to polluters of: (1) disposal cost, (2) lost public use, and (3) the cost of damage to both public and private parties. We argue that expanding liability to government while utilizing a strict spatial test might assist in driving the parties to remedy the problems. Even if there is some legislative solution soon, the U.S. Supreme Court will almost surely decide one of these cases (or a similar one) unless legislation includes protection for damages incurred by government and private individuals. Pending court cases may contribute to a political solution because damages incurred may exceed trillions of dollars.

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Flooding caused by Hurricane Katrina in the New Orleans area is visible from Air Force One Wednesday, Aug. 31, 2005 as President Bush returned to Washington from Crawford Texas. Credit: White House photo by Paul Morse



First Asian Carp Found in Waterway near Great Lakes

A 20-pound Asian carp was fished out of a waterway close to the Great Lakes and beyond twin electric barriers designed to keep them out, authorities said on June 23rd. It was the first time the voracious invader has been found beyond the electric barriers in the waterways that connect Lake Michigan with the Mississippi River basin, where the carp have proliferated. "It's important evidence, and the more information we know about where the carp are, the better ... that's the reason we're intensifying the effort" to find any Asian carp beyond the barriers, said Chris McCloud, a spokesman for the Illinois Department of Natural Resources. The live Bighead carp was fished out on Tuesday by a fisherman contracted by the government in Lake Calumet, 6 miles from Lake Michigan. It could have been dumped there or could have found its way past the electric barriers meant to block all fish species, McCloud said. Michigan and several other U.S. states bordering the Great Lakes have filed suit demanding a separation of the two basins, fearing Asian carp will ruin the Great Lakes' \$7 billion fishery. Several environmental groups support the separation of the basins, which were connected by man-made waterways a century ago. Commercial interests including tour boat operators, barge companies, and the recreational boating industry oppose the closing of the connecting waterways. Excerpted from Environmental News Network. http://www.enn.com/top_stories/article/41467

Population Diversity Key to Protecting Fish Species

For more than 50 years, the salmon fishery in Alaska's Bristol Bay has been one of the most valuable fisheries in the United States. Each year, fishermen catch an average of 25 million sockeye in the bay; in 2009, the catch was worth more than US\$120 million. A team of researchers from the University of Washington has identified what it believes to be a key reason for the bay's continued productivity: The fact that several hundred discrete populations of sockeye salmon inhabit the network of rivers and lakes that empty into it. According to the researchers, this high diversity of populations causes what they call a "portfolio effect," buffering the fishery from the ups and downs of particular stocks. Writing in a recent edition of the journal *Nature*, the researchers, led by Daniel Schindler, a professor of fishery and aquatic sciences at the university, say that their study provides the first solid evidence that population diversity within a species plays a key role in maintaining stable fisheries. Excerpted from Seaweb's Ocean Update. <http://www.seaweb.org/news/oceanupdate.php#diversity>

Coastal Wiki

The Coastal Wiki, abbreviation for Coastal and Marine

Wikipedia, is an Internet encyclopedia providing up-to-date information for coastal professionals. It is reported to be continuously improved, complemented and updated by expert users, and an excellent place to share ideas and learn from others. Excerpted from EUCC news. www.coastalwiki.org

Marine Biogeographic Database (OBIS) Moves to Open Source Software

OBIS was established by the Census of Marine Life program (www.coml.org). It is an evolving strategic alliance of people and organizations sharing a vision to make marine biogeographic data, from all over the world, freely available over the World Wide Web. Created as the data integration component of the Census of Marine Life, (CoML, a global network of researchers in more than 80 nations engaged in a 10-year scientific initiative to assess and explain the diversity, distribution, and abundance of life in the oceans) OBIS has grown significantly beyond its original scope and now integrates data from many sources over a wide range of marine themes, from the poles to the equator, from microbes to whales. Recently, it has been announced that this large system is moving to open source software. It has chosen the OpenGeo Suite Enterprise Edition to replace existing geospatial mapping tools. Excerpted from EUCC News. <http://www.eucc.net/en/news/CMN2010-02-03.pdf>

University of Virginia Seeks Dismissal Of 'Unprecedented' Effort Against Researcher

The University of Virginia (UVA) has launched a legal effort to set aside the state attorney general's demands for extensive records involving Penn State climatologist Michael Mann. A number of scientific organizations have expressed concern over Attorney General Ken Cuccinelli's "unprecedented" (the term used by UVA) investigation of Mann's research activities while he was at UVA from 1999 to 2005. As a state entity generally represented by the state's attorney general, the University had to retain outside counsel to defend against what it characterized as an unwarranted intrusion into the scientific process and academic freedom. "The information requested goes to the core of academic research otherwise protected by law," attorneys from the firm of Hogan Lovells said on behalf of UVA. "Unfettered debate and the expression of conflicting ideas without fear of reprisal are cornerstones of academic freedom; they consequently are carefully guarded First Amendment concerns." Excerpted from the Yale Forum on Climate Change and the Media. <http://www.yaleclimatemediaforum.org/2010/06/uva-seeks-dismissal-of-effort-against-mann/>

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Best Practices for Marine Spatial Planning

The Global Marine Team of the Nature Conservancy has released a report on the June 2009 workshop on Marine Spatial Planning in Practice. The workshop report, *Best Practices for Marine Spatial Planning* (PDF, 2 MB), includes advice on geographic planning boundaries, planning scale and resolution, data collection and management, multi-objective planning including aims and outcomes, and interactive decision support. Excerpted from MA CZ News.

http://www.nature.org/initiatives/marine/files/msp_best_practices.pdf

Canada's Controversial Seal Hunt got under way in April, but many fewer boats were participating. In July of 2009, the European Union instituted a ban on imports of seal products, which the Canadian government is fighting, taking its objections to the World Trade Organization.

The increasing lack of demand, also due to the recession, has meant that the price for pelts has gone from \$100 a few years ago down to \$14 last year, according to the Associated Press. Another factor affecting this year's hunt is the very mild winter which has resulted in thin or no ice along the shores where the pups are born, and where the hunters usually harvest them. Environment Canada, a government department, reported that until mid-March the ice was at its lowest in four decades of record keeping, according to The New York Times. Some of the seals have gone further north in search of ice; but mostly this situation has led to a very high mortality rate. The pups are born on the ice which provides them protection from land predators until they are ready to swim. Many have been found drowned and washed up on shore. So, despite the yield from the smaller hunt, with this year's harvest estimated at a maximum of 50,000 animals vs. this year's quota of 330,000, there is no respite for the seal pups. Excerpted from <http://www.atlanticcoastwatch.org/Newsletter.htm>

The body of a minke whale and its calf are dragged onto the whaling ship. Credit: Australian Customs Service



The body of a minke whale and its calf are dragged onto the whaling ship. Credit: Australian Customs Service

The Pew Center on Global Climate Change released the report, *Adapting to Climate Change: A Call for Federal*

Leadership (PDF, 788 KB), which highlights the important role of the federal government in reducing the vulnerability and strengthening the resiliency of the economy and natural resources in the face of climate changes. While many efforts to adapt to climate change will occur at the state and local level, the federal government is a critical player in an effective and coordinated approach to climate change adaptation in the United States. Excerpted from MA CZ News.

<http://www.pewclimate.org/docUploads/adaptation-federal-leadership.pdf>

NOAA's National Ocean Service launched its State of the Coast website, a resource describing the connections among healthy coastal ecosystems, a robust U.S. economy, a safe population, and sustainable quality of life. Features of the site detail the projected changes in coastal population, economic contributions of coastal areas, health of U.S. coasts, and vulnerability to long-term sea level rise. See <http://stateofthecoast.noaa.gov>.

Whaling Update: More whales are being killed by chemical and noise pollution, entanglement in nets, climate change or collisions with ships than by whaling itself, delegates to the world's main whaling body said at the recent International Whaling Commission (IWC) meeting. A proposal to replace the whaling moratorium with a limited cull failed at the IWC meeting because it was opposed by many anti-whaling nations as well as by Japan, which refused to stop hunting for whales in the southern ocean. It was seen as a chance for the 88-member IWC to resolve a deadlock that some experts say has diverted energy from other threats to whale conservation. For some observers, the failure of the talks exposed growing contradictions in the IWC, which has no power of enforcement. Critics say it

has failed to stop Japan in particular getting around the moratorium by saying it hunts for research--even though much of the meat ends up on dinner plates--and that it has also not tackled the other threats to whales. "Accidental catches and scientific permits have killed more than 10,000 whales since the moratorium was put in place. What kind of a moratorium is that?" said Monaco IWC Commissioner Frederic Briand. Excerpted from Planet Ark. <http://planetark.org/wen/58547>



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that day; a coherent plan to move forward to a hoped-for new energy future.



Secretary Salazar emphasized that we need comprehensive climate change legislation to spur this new energy future. Indeed, he made clear that President Obama believes that it is a moral imperative to address climate change. Referencing the tragic Gulf oil spill, Salazar pledged that the nation would continue to do everything possible to fight the oil on the sea and as it comes ashore. He described

the changes occurring at DOI's Minerals Management Service, well-publicized in the popular press, intended to ensure better management of offshore drilling. The spill, he emphasized, makes clear our overdependence on fossil fuels, an issue that we must grapple with as a nation and as a world.

Panelists and speakers represented government, academia, industry and nongovernmental organizations, bringing diverse perspectives. Amanda Little, author of *Power Trip: From Oil Wells to Solar Cells—Our Ride to the Renewable Future* pointed out the magnitude of our energy appetite; Americans consume 20 million barrels of oil in a single day; she raised the question of how we got to here. In the 1970s, the US was a premier oil producer; now we are a net importer. Oil and energy fueled the American dream, becoming a source of wealth and power. Now it's become a source of great vulnerability and our mindset must change. Jeff Wright, Director of the Office of Energy Products at the Federal Energy Regulatory Commission told the audience that electronic gadgets account for one third of U.S. energy use. He also pointed out that our energy consumption has tripled in the last 60 years, rising far faster than our population has expanded. Sally Yozell, Director of Policy for the National Oceanic and Atmospheric Administration (NOAA) suggested that we need a paradigm shift to advance our nation's way of thinking.

Congressman Sam Farr (CA-17) opened the second day of presentations and discussions, speaking about governmental failures and political difficulties in protecting the ocean and its resources. Clearly frustrated, he described the ocean as a "Wild West," and implored the audience to find a way to bring about needed change in how the

ocean is governed and to ensure that more funds are allotted to understanding and preserving it. It was slightly disconcerting to hear this charge coming from someone elected by voters to represent them in governing.

Many speakers focused their discussion on the impacts of climate change, recognizing that fossil fuels are a major contributor to our carbon footprint. As Holly Bamford (Acting Deputy Assistant Administrator for NOAA's National Ocean Service) told the audience, coastal habitats help reduce impacts of floods and storms on communities; much research needs to be done to understand the affects of climate change, even something as simple as whether large commercial vessels (e.g., tankers) passing under bridges to get to port will continue to fit under those bridges as sea level rises. Offshore facilities must also be prepared for rising seas. Climate change is producing warmer and more acidic oceans. Dr. Gretchen Hoffman of University of California, Santa Barbara questioned how larval forms of ocean species—often more vulnerable than adults—will react to cumulative and multiple stressors. Species have varying resilience to variable pH. Hoffman described lab experiments where sea urchins and oyster larvae are placed in differing conditions. The urchins proved fairly robust as water acidified, but when an additional stressor was added, i.e., heat, they were less tolerant than larvae raised in more typical pH waters. What happens when thermally stressed species are also exposed to additional chemical pollution, e.g., an oil spill? The oysters in more acidic water grew, but were smaller than those raised in typical pH. It isn't just physiology that's affected, either; behavioral changes can occur as well, e.g., the ability of clownfish to smell their natal reef declines as water acidifies.



Secretary of the Interior Ken Salazar gives the opening keynote at Capitol Hill Ocean Week 2010. Photo credit: Eddie Arrossi

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Representative Brian Baird. Credit: Eddie Arrosi

Other elected representatives who spoke included Representative Robert Wittman (VA-01), Senator Sheldon Whitehouse (RI), Representative Mike Castle (DE-01) and Representative Brian Baird (WA-03). Baird, who is retiring from Congress, urged the audience to be sure and always bring up the problem of ocean acidification when speaking of global warming. Several panels discussed the market for alternative energy sources, including offshore wind, as well as “hydrokinetics,” which embraces waves, tides and currents; congressional initiatives for a clean energy future; and ocean and energy policy in a changing arctic. Reference was made several times to the need for comprehensive planning to adequately protect important resources, while providing predictability to industry. The new National Ocean Policy is expected to provide the framework for this marine spatial planning. Chris Mann, a Senior Officer in the Pew Environment Group was unambiguous when he declared that the spill in the Gulf was a failure of technology, a failure of prevention and response, and a failure of governance. He urged the audience to use the outrage over this disaster to focus and to drive needed change.

For additional information about CHOW 2010, please see <http://nmsfocean.org/>

Call for Papers

A Special Theme Issue of the journal, *Coastal Management*: “**Making the Connection: Translating Science into Effective Policy**”

The Coastal Society's TCS22 Conference (June 13-16, 2010) in Wilmington, North Carolina explored the issues involved in translating scientific knowledge and perspectives into effective coastal management policies and practices in its Closing Plenary session. To more fully develop this theme, The Coastal Society invites submission of full-length manuscripts for publication in a special theme issue of the journal, *Coastal Management*, a peer-reviewed international journal devoted to exploring all aspects of coastal management. Papers addressing all aspects of the application of scientific knowledge and perspectives to coastal management policy and practice at local, regional, national and/or international scales are welcome. All submissions will go through standard double blind peer review. The theme issue is scheduled to be published in early 2011 and is likely to receive special publicity coverage by Taylor and Francis, which should help raise the profile of the theme issue papers.

Submission should follow the format specified by *Coastal Management* in “Instructions to Authors” (<http://www.tandf.co.uk/journals/tf/08920753.html>). Questions and submissions may be directed to theme issue Guest Editors: Lawrence Cahoon, Professor of Biology and Marine Biology, University of North Carolina Wilmington, Wilmington, NC 28403 (Cahoon@uncw.edu), and Christopher Dumas, Professor of Economics, University of North Carolina Wilmington, Wilmington, NC 28403 (DumasC@uncw.edu). Please notify one of the guest editors of your interest to submit. Full submissions are requested by Sept. 15, 2010.



STANFORD UNIVERSITY

This spring, the Stanford student chapter hosted a variety of speakers, offered screenings of two movies, and hosted an Oceans Colloquium at Hopkins Marine Station in Monterey, California. Details follow.

Spring Speakers Series:

Lance Morgan discussed marine sanctuaries. As Vice-President for Science at the Marine Conservation Biology Institute, Morgan has many years experience in research in population dynamics, marine protected areas, marine mammal behavior, impacts of fishing methods on ecosystem health and assessments of deep sea corals. He is currently the Conservation Chair of the Cordell Bank Sanctuary Advisory Council.

Jan Cassin discussed climate change adaptation and ecosystem services. Cassin is an employee-owner of Parametrix consulting firm. Originally founded in 1969 to provide wastewater engineering services, Parametrix has grown through the years to include additional core disciplines in transportation, natural resources, toxicology and risk sciences, solid waste management, and community building.

Mike Sutton discussed ocean policy. Sutton has served as vice president and founding director of the Center for the Future of the Oceans at the Monterey Bay Aquarium since 2004. Before joining the aquarium, he was director of the David and Lucile Packard Foundation's conservation and science program. Since May of 2007, he has been an appointed member of the California Fish and Game Commission.

Movie Screenings:

Red Gold; a movie about fisheries in Alaska, co-produced by a Stanford student, and Chasing Giants, a movie about controversial whaling in Norway, co-produced by a Stanford student.

Research Colloquium:

The Oceans Colloquium at Hopkins Marine Station, Monterey, California hosted current undergraduate and graduate research presentations/poster sessions in marine and related fields.

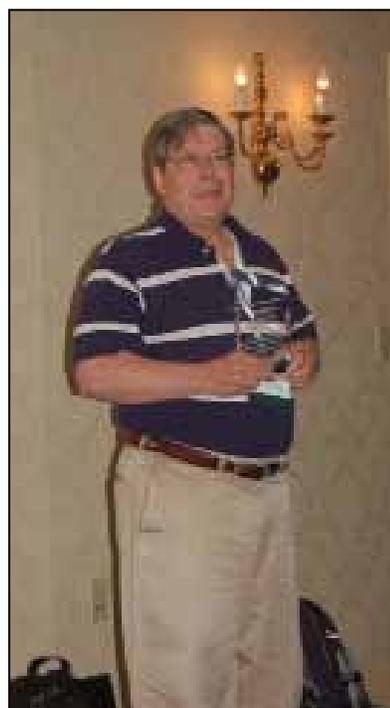
EAST CAROLINA UNIVERSITY

The ECU-TCS chapter began combining monthly business meetings with presentations of interest. In March we heard Joyce Steinmetz (chapter treasurer for the 2010-11 year) discuss the interactions between ship wrecks and commercial fishing, based on her dive experience.

The following month Cecelia Krahforst (ECU-TCS member) discussed her research on vocalization responses of croaker species.

Chapter members Liz Brown Pickren, Michelle Covi and Joyce Steinmetz were the grateful recipients of TCS Student Travel Awards which helped support travel to Wilmington for the TCS22, where ECU was well represented with our students making four oral presentations, three poster presentations and moderating two sessions. Meanwhile, our faculty members made seven oral presentations and moderated two sessions. Greg Meyers (Chapter President 2004-06) and Jen Cudney (Chapter Historian 2008-09) served on the TCS22 organizing committee and were responsible for arranging the student activities, including the panel of employment experts at the student luncheon, a resume workshop and the student pub-crawl. They also organized the topics for the Dining Discourses Luncheon.

The Chapter presented our first ever achievement award to Dr. Lauriston King, retired director of the ECU Coastal Resources Management program and a past president of TCS (1990-92). The chapter will recover



Dr Lauriston King received recognition from ECU Chapter. Credit: Jennifer Cudney Burch

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From left to right: Deanna Swain, Elizabeth Brown-Pickren, Michelle Covi, Hillary Huffer, and Joyce Steinmetz. Credit: Jennifer Cudney-Burch

Coastal Management Journal

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

The Challenge of Threatened and Endangered Species Management in Coastal Areas
By Olivia E. LeDee; Kristen C. Nelson; Francesca J. Cuthbert

Public Stakeholders' Perception of ICZM and Coastal Erosion in the Mediterranean
by Emmanouil T. Koutrakis; Argyrios Sapounidis; Silva Marzetti; Valentino Giuliani; Simone Martino; Mauro Fabiano; Valentina Marin; Chiara Paoli; Emmanuel Roccatagliata; Paola Salmona; Helen Rey-Valette; Sebastian Roussel; Daria Povh; C. G. Malvárez

Measuring Public Access to the Shoreline: The Boat-Based Offset Survey Method
by Robert Thompson; Tracy Dalton

from the Wilmington meeting over the summer and be active again when ECU is back in session in August.

UNIVERSITY OF WASHINGTON

The UW student chapter of The Coastal Society is proud to have finished up a great academic year with more successful activities! On May 15, we participated in a Lake clean-up organized by the UW student chapter of American Fisheries Society in partnership with Puget Soundkeeper Alliance. Seventy-four people came out and loaded into row boats and kayaks and for a successful lake clean-up.

We also held our third Blue Drinks networking event of the year on May 25. This was a great culminating activity and allowed lots of interaction among alumni, faculty and students interested in marine and coastal management.

Thanks to support from TCS student travel awards, matched by the UW School of Marine Affairs and Washington Sea Grant, TCS UW was able to send 9 students to attend and present at TCS22.



Representative Jones Presents NOAA Excellence Awards

On June 10, Representative Walter B. Jones, Jr. (R, NC-3) joined NOAA's Director of Policy, Sally Yozell and Sarah Cooksey, Delaware Coastal Program Administrator to present awards at the Walter B. Jones Memorial and NOAA Excellence Awards for Coastal and Ocean Resource Management ceremony at the Rayburn House Office Building in Washington, DC. Individuals, local governments, and non-governmental organizations were recognized for their contributions to, and excellence in, estuarine, coastal, and marine management. As chairman of the House Merchant Marine and Fisheries Committee, Jones (father of the current Representative Walter B. Jones) was a strong supporter of the National Marine Fisheries Service and of coastal zone management and a leader on numerous coastal and ocean legislative initiatives. NOAA instituted the Walter B. Jones Memorial awards under authority of the Coastal Zone Management Act and later added the NOAA awards to recognize excellence in coastal management. The winners are of the 2010 Awards are:

Walter B. Jones Awards

Coastal Steward; Honorable Charles Albertson, North Carolina State Senator, for his commitment to balancing uses and protection of coastal resources in his native North Carolina.

Excellence in Local Government: City of Astoria, OR, for its leadership in involving the community in redevelopment of its Columbia River Estuary riverfront; City and Port of Bandon, OR, for waterfront redevelopment that has made the town an Oregon travel destination, bringing economic vitality and diversity; and Town of Hull, MA, for implementing the Massachusetts StormSmart Coasts program to manage development to protect life and property from coastal hazards.



NOAA Excellence Awards

Susan Snow-Cotter Award for Excellence in Ocean and Coastal Resource Management; Deerin Babb-Brott, Director, Massachusetts Coastal Zone Management Program, for leading an exhaustive public engagement process to implement the Massachusetts Ocean Management Plan. The Plan connects innovative practices and partners for informed decision-making about the Commonwealth's ocean and coastal waters; Grover Fugate, Director, Rhode Island Coastal Resources Management Council, for leadership in developing critical coastal and ocean resource management programs, including Special Area Management Plans that allowed the State to tailor plans to balance competing uses of Rhode Island's marine and coastal areas; and Becky Suarez, Manager, Elkhorn Slough CA National Estuarine Research Reserve, for leading the Reserve to become a model of preservation, protection, and restoration of critical resources on the central California coast.

Excellence in Promoting Diversity in Coastal and Ocean Resource Management; Jonnette Bastian-James, harmful algal bloom (HAB) specialist for the Quinault Indian Nation, Puget Sound, WA, for her visionary approach to monitoring HAB to improve management of critical coastal shellfish resources by her Tribe and other native peoples.

Non-Governmental Organization of the Year; Port Orford Ocean Resource Team (POORT), OR, a unique community-based organization founded by commercial fishermen, for their work in promoting community engagement and strategic planning for long-term sustainability of the Port Orford reef marine ecosystem and the social systems that depend on it.

Volunteer of the Year; Rich Hamel, retired aero-space engineer and volunteer at the South Slough, CA National Estuarine Research Reserve for more than 10 years. Hamel helped raise money to expand facilities, including a new exhibit hall, multi-purpose auditorium, classroom,

and overnight accommodations for visiting researchers, and for design and installation of new interpretive exhibits.

Excellence in Coastal and Marine Graduate Study: Jena Campbell, University of Texas; Lisa Greber, University of Massachusetts Boston; Ben Landis, Mary Turnipseed, Duke University; Steve McMurray, University of North Carolina Wilmington; Erika Washburn, University of New Hampshire; and Robin Wienke, North Carolina State University.

Representative Jones Presents NOAA Excellence Awards Senator Merkley and Representative Blumenthal Visit With Awardees Credit: NOAA

**Coastal Zone Canada 2010**

July 25-29, 2010, Charlottetown, Prince Edward Island, Canada

<http://www.gov.pe.ca/czc2010>

California and the World Ocean 2010

September 7-10, 2010, San Francisco, CA

<http://www.cce.csus.edu/conferences/cnra/cwo2010/index.htm>

1st World Seabird Conference,

September 7-11, 2010, Victoria, British Columbia

<http://www.worldseabirdconference.com/main.cfm?cid=1813&nid=12669>

1st International Conference on Marine and Maritime Affairs (ICMMA)

September 15-16, 2010, Plymouth, UK

<http://www.icmma.info/>

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>

Global Conference on Aquaculture 2010,

September 22-25, 2010, Phuket, Thailand

<http://www.aqua-conference2010.org>

Working Waterways & Waterfronts National Symposium on Water Access 2010

September 27-30, 2010, Portland, Maine

<http://www.wateraccessus.com>

The International Conference 'Deltas in Times of Climate Change'

September 29-October 2, 2010, Rotterdam, the Netherlands

http://www.climatedeltaconference.org/templates/dispatcher.asp?page_id=25222734

Aquaculture Europe 2010

October 5-8, 2010, Porto, Portugal

<https://www.was.org/easonline/>

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/wsfc2010/index.html>.

6th International Conference on Marine Waste Water Discharges and Coastal Environment

October 25-29, 2010, Langkawi, Malaysia

<http://www.mwwd.org>

3rd International Conference on the Management of Coastal Recreational Resources

October 27-30, Grosseto, Italy

<http://www.um.edu.mt/iei/mcrr3-2010>

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>

Preparing for Climate Change: Science, Practice and Policy

RAE's 5th Annual Conference and Expo on Coastal and Estuarine Habitat Restoration

November 13-17, 2010, Galveston, TX

www.estuaries.org/conference

International Seminar about Bridging the Gap Between Science and Coastal Management

November 24th-26th, 2010, Texel, The Netherlands

<http://www.eucc.net/texel2010/>

National Conference for Science, Policy and the Environment: Our Changing Oceans

January 19-23, 2011, Washington, DC

<http://ncseonline.org/conference/Oceans/>

ICS2011 - 11th International Coastal Symposium

May 9-14, 2011, Szczecin, Poland

<http://www.ics2011.pl/>

2nd International Symposium on Integrated Coastal Zone Management

July 3rd - 7th, 2011, Arendal, Norway

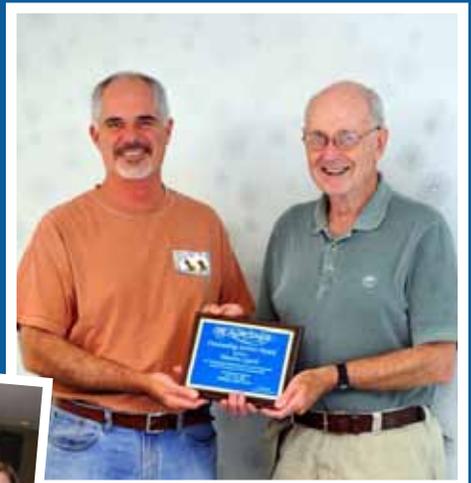
www.imr.no/iczm

Coastal Zone 11

July 17-21, 2011, Chicago, IL



The Coastal Society's 22nd
"Shifting Shorelines: A





ADAPTING TO MORE LINES: ADAPTING TO THE FUTURE International Conference

International Conference,
Adapting to the Future”





The Coastal Society's 22nd
"Shifting Shorelines: Ad



With many thanks to our enthusiastic photographers; Jenn



SETTING FOREGROUND: ADAPTING TO THE FUTURE International Conference

International Conference,
Adapting to the Future”



Christina Cudney-Burch, Kirsten Fletcher, Randy Flood and Phil Prete



CZMA's Unique Role in Energy Development & Spill Response

Kristen M. Fletcher

While the Deepwater Horizon blow-out was not deliberate, it is the nation's obligation to be deliberate in our response to it, to be bold in looking ahead and putting in place the resources, authorities and plans to reduce the chances for such a future environmental disaster. There is no more critical time than now to renew the nation's commitment to coastal states' ability to plan, prepare and respond to impacts from offshore energy development, ensuring that states have the appropriate authorities and resources to address coastal resource needs.

While each U.S. coastal state has different planning and response authorities, management authority and consistency review under the Coastal Zone Management Act (CZMA) serve as valuable tools among the nation's 34 states with approved coastal programs. Throughout the history of the CZMA, one of the greatest incentives for states to participate in the nation's coastal management program is the ability to review federal activities in and beyond state waters that have an impact on the coastal zone.

CZMA consistency can be employed in a proactive manner to review plans developed by the federal government in preparation for incident response. The coordination role of state CZMA consistency coordinators is also a valuable tool in the development or updating of those plans. State coastal programs, through their partnerships with NOAA, are uniquely set up to facilitate the coordination of government agency technical staff, elected officials, and other stakeholders in preparation for disasters such as these, as well as natural disasters. This coordination identifies available resources and potential needs for additional resources for adequate, timely responses to such incidents.

For example, Alaska's consistency review of outer continental shelf (OCS) exploration provides opportunities to prepare for the unique Arctic conditions in that state. California's spill response standards were developed during state consistency review of oil and gas activities and served as a foundation for California's Oil Spill Preven-



Clouds of smoke billow up from controlled burns taking place in the Gulf of Mexico May 19, 2010. The controlled burns were set to reduce the amount of oil in the water following the Deepwater Horizon oil spill. Credit: John Kepsimelis, U.S. Coast Guard

tion and Response Act of 1990.

States integrate CZMA authority with requirements under the Oil Pollution Act (OPA), which establishes the federal spill response. One example of the critical interplay between OPA and the CZMA is the review of flow rates from an offshore well. The initial Deepwater Horizon incident flow rate estimates were 1,000 barrels per day, subsequently increased to 5,000 barrels per day, and now appear to be greater than 25,000 barrels per day. In Alaska's review of Shell's Chukchi Sea Exploration Plan, there was not sufficient data to determine historical flow rates from the well in question, so the state required that Shell be able to respond to higher volumes of flow if the actual flow rate increased.

When a spill occurs in California, the state ensures that all affected resources are included in the assessment of natural resource damages. In the past, California has requested assessments for public access impacts, beach closures, and tourism loss in addition to natural resource damages such as fishery closures and wildlife losses.

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Even though the CZMA and OPA provide adequate authorities for planning and response, the effectiveness of these statutes is limited by capacity and resources. Congress must reconsider these laws along with federal assistance in research and implementation. As the CZMA plays such a vital role in planning for management of coastal resources and responses to environmental emergencies such as the Deepwater Horizon Spill, the fact that it has been overdue for reauthorization since 2000 shows a crack in the foundation for state preparedness. While the existing CZMA provides enough flexibility for states to develop effective responses to a spill, the need for reauthorization is evident. Also, the Outer Continental Shelf Lands Act currently provides a 30-day window for the review of OCS Exploration Plans. States cannot conduct an effective consistency review in 30 days. Congress should consider extending the review period to allow states to conduct proper reviews. Finally, most states do not have the capacity to implement their own inspection program of offshore platforms and have relied on Minerals Management Service (MMS) inspection reports; federal funds are needed to enable states to participate in the MMS inspections to facilitate a more thorough and objective review.

The Deepwater Horizon spill has starkly illustrated the research needs in the planning and response for oil spills. Enhanced research is needed, including boom technology that enables better environmental protection and evaluation of the impacts of dispersants on natural resources. NOAA also needs the resources to serve as an Oil Spill Portal for Dissemination of key information and lessons learned. A model portal has been created by the Gulf Sea Grant Programs that have identified spill-related research needs to pursue through their Gulf-wide Research Program (http://gulfseagrant.tamu.edu/oilspill/GMRP_oil_spill_research.htm).

A Gulf of Mexico oil leak releasing thousands of barrels per day that may reach the Southeast coast

within a few months is a prime example of the interconnectedness of coastal and ocean ecosystems. Providing states with the authority, research and capacity during the response to the Deepwater Horizon spill is vital--for the Gulf and beyond.

This article is adapted from testimony offered before the Subcommittee on Insular Affairs, Oceans and Wildlife, Committee on Natural Resources, U.S. House of Representatives, Hearing on State Planning for Offshore Energy Development: Standards for Preparedness June 24, 2010. The hearing video and written testimony is archived at http://resourcescommittee.house.gov/index.php?option=com_jcalpro&Itemid=27&extmode=view&extid=360



Cleaning an oiled baby Brown Pelican chick at Deepwater Horizon 2010 oil spill response the at Fort Jackson Bird Rehabilitation Center in Buras, Louisiana. Credit: International Bird Rescue Research Center (IBRRC)

Kristen M. Fletcher is Past President of The Coastal Society and Executive Director of the Coastal States Organization. CSO is proudly celebrating its 40th year of service to the Governors of the 35 coastal states and territories in Washington, DC on legislative and policy issues relating to the sound management of coastal, Great Lakes, and ocean resources.



Award Winning Moments

It is a tradition at each TCS conference to bestow awards on individuals who merit special recognition for their efforts to advance The Coastal Society and the field of coastal management in general. At TCS22, President Jeff Benoit presented the following awards to 5 very deserving recipients. We applaud their very fine work and dedication.

The Robert W. Knecht Award for Professional Promise is given to a rising professional in the field of coastal and ocean management who, in their early career, best emulates the vigor, dedication, vision and generosity of Bob Knecht...to **Tali MacArthur**. Tali MacArthur is a coastal resource scientist with the New Jersey Department of Environmental Protection's Coastal Management Program in Trenton, NJ. Tali has been a member of TCS since 2001 and attended her first TCS conference as a graduate student at the University of Washington. She was elected to serve on the Board of Directors from 2007 to 2009, and is currently an Ex-Officio member of the Board. Tali was co-chair of the Land Use Track at TCS20. She personally coordinated initiatives to make the past three TCS conference "greener", and for TCS21 and TCS22 Tali took on responsibility for making the conference "carbon neutral."

The President's Award is offered to a Society member who has given unusual service to the Society...to **Kevin McLean**, for exceptional service to The Coastal Society for design and construction of a new website. 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!

Our **Outstanding Service Award** goes to a public figure for exceptional accomplishments related to the purposes of the Society...to **Maurice Lynch**, who has dedicated himself to coastal management, seeing it through its infancy and into adolescence. Mo Lynch represents what TCS stands for. He is an educator, scientist, and mentor of young professionals. Mo has been tireless in his support and dedication to The Coastal Society. He was one of the early President's of TCS, serving in that capacity from 1984 to 1986. Mo was then elected as a TCS board member from 1993 - 1996. Most notably, Mo contributed

countless hours as Treasurer, watching over our precious financial resources from 2002 to 2007.

The Distinguished Service Award for dedication to the Society; the words to focus on are distinguished, service and dedication...goes to **Laurie Jodice** for unwavering commitment and dedication to The Coastal Society and its mission. Laurie has been a TCS member since 1999 and was a board member from 2003 to 2008. She was the conference coordinator, author, and proceedings editor for the TCS17 conference in Portland, Oregon; and a planning committee member and website author for the TCS18 conference in Galveston, Texas. Prior to moving to South Carolina, she served as the Oregon representative, charter board member, and website author for the Cascadia Regional Chapter of TCS. She currently serves on the TCS Education and Communication Committees and is chair of the website development team.

A Certificate of Appreciation was presented to Taylor and Francis Group, LLC, in recognition of the valuable partnership established with The Coastal Society allowing our members to receive and contribute to the Coastal Management Journal and also in thanks for the Marc Hershman Student Travel Scholarships.

At each TCS conference, student awards are given as a means of acknowledging the best student paper, poster and presentation. Past President Paul Ticco presented the following 3 awards:

The **Thomas Bigford Best Student Paper** went to **Jack Kittinger**, University of Hawaii-Manoa, for his presentation, *Historical Reconstruction Reveals Recovery in Hawaiian Coral Reefs*.

The **Thomas Bigford Best Student Poster** went to **Megan Fowler**, Vermont Law School, for her poster: *South Carolina Takings, the Public Trust Doctrine, and Coastal Management Practices Recognizing Sea Level Rise*.

The **Sea Grant Association Award for Best Student Paper** went to **Sathya Gopalakrishnan**, Duke University for her presentation, *Managing Eroding Beaches: An Economic Morphological Approach*.



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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.