The Coastal Society

TCS Bulletin
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SALMON AQUACULTURE STRUGGLES IN MAINE

by John Duff

Maine's salmon aquaculture industry may be on the ropes. Month after month, the newspapers report on some new setback to the industry. In some cases, the set-back is related to the natural environment, which can turn a profitable venture into a business bust with stormy seas and damaged equipment. As likely as not, however, the challenges faced by Maine's salmon aquaculture industry stem from the business environment in which they must operate.

In November, one of Maine's larger salmon aquaculture facilities shut down in the face of economic, environmental and regulatory impediments. Salmon aquaculture operators have been striving to become more economically efficient and technologically competitive, but evolving legal and regulatory constraints may endanger the industry in Maine.

While some suggest that the industry must deal with the realities of their environment by ensuring that coastal waters are not seriously degraded and local wild stocks are not threatened, aquaculture proponents indicate that it is not the laws themselves that destabilize the industry, but the manner in which they are applied. They point to shifting regulatory regimes, imperfect property rights systems, and the uncertain and evolving application of federal

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HOW DO FEDERAL AGENCIES DISSEMINATE RESEARCH FINDINGS RELEVANT TO COASTAL MANAGEMENT?

by Jeff Benoit

Individuals within the coastal and estuarine management community often express a general level of frustration trying to identify specific research that is being sponsored by federal agencies, where to find current research results, or how to access the volumes of data being amassed by federal agencies. At the same time, federal agencies point to their attempts to improve the dissemination of research information and results to a broader audience through enhanced websites, regional meetings, outreach programs, etc. So why does the gap between researchers and the management community still exist, and what can be done to resolve the differences and create a more meaningful dialogue?

This article is a summary of a white paper sponsored by the Coastal States Organization (CSO) as part of a broader effort to advance the use of scientific research for decision-making among the coastal and estuarine management community. The full white paper includes many good examples and specific recommendations on improving the effectiveness of disseminating research information; it can be accessed at:

www.uhi.umb.edu/publications.htm

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INSIDE

Six and a half years ago at the TCS conference in Williamsburg, Virginia, I decided to get involved.

Working with, and learning from, the students in our midst

As a TCS member working in an academic institution, I saw an untapped wealth of energy, intelligence, and enthusiasm in the form of countless graduate students who were engaged in the study of coastal and ocean issues. "What if," I asked my colleagues, "we began an effort to actively encourage student memberships to bring more of these talented folks into TCS?" And the suggestion took hold. An ever-increasing share of our TCS membership is comprised of students. Since 2000, the Board of Directors has taken a number of steps to encourage student participation in TCS. Shortly after I joined the TCS Executive Committee, I had an opportunity to work with a group of folks who thought it was time to give our student members a voting right equal to that of our general members. Since then, the students themselves have taken the lead in augmenting the manner in which TCS fulfills its educational and professional development objectives. In the last three years, four student chapters of TCS have come into existence at Duke University, the University of Washington, Eastern Carolina University and the University of Rhode Island. The students in those chapters tell us they've been learning a lot and that they've been making important career contacts, but don't think for a minute that this relationship is a one-way street. Every week or so, someone in TCS tells me how impressed they are with the work that the students themselves have been engaged in. So, the general membership and the organization's leadership learn quite a bit from the students as well.

The state of the organization

From my earliest days on the Board of Directors, I also wanted to get involved in, and learn about, the basic operations of TCS. The Coastal Society, after all, is a small business. And as a non-profit organization, it has certain business principles that it must apply. I'm happy to say that TCS has moved to implement more and more business tools and approaches into its operating structure. Shortly after the new year begins, you'll see our Annual Report published in the pages of this periodical. While the numbers haven't yet been finalized, it looks as though TCS will be in the healthiest financial condition in the organization's history. As TCS President I can take great pride in making that statement, but I can't take the credit for getting us there. The credit belongs to all of the volunteers who have poured their time, energy, and talent into the functions of The Coastal Society.

As my tenure as TCS President comes to a close, I wanted to share with you a bit about what the organization has been doing and how it is doing. I also wanted to say thanks for letting me get involved.

Happy Holidays and Best Wishes for a Bright New Year!

John Duff
TCS President

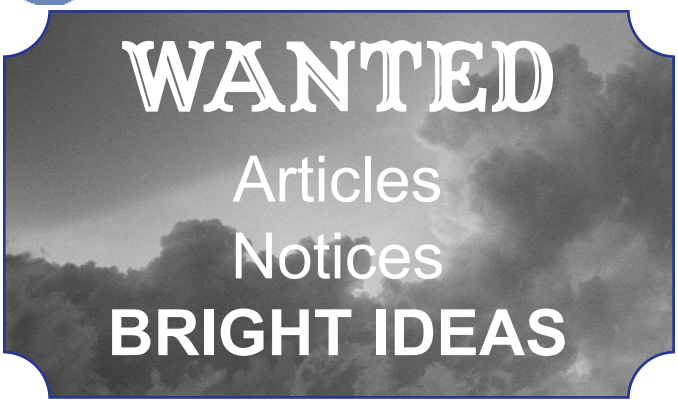
* This issue produced with assistance from the Urban Harbors Institute, University of Massachusetts Boston.

Welcome to another issue of TCS BULLETIN. In this issue, the BULLETIN covers issues of aquaculture-related law and coastal management research (page 1). This issue provides career information for readers interested in graduate fellowships, jobs, and internships (see pages 8 & 9). As always, we've provided information and links related to upcoming conferences (page 4).

As noted in this space in the last issue, after two years of publishing the BULLETIN in parallel formats (print and electronic PDF), The Coastal Society will move toward exclusive electronic distribution to our general members beginning in 2005. This decision will allow TCS BULLETIN to reach you quickly, reduce the use of valuable natural and financial resources, and provide you with more information than was possible in the past. We will continue to produce a very limited number of paper copies of the BULLETIN to distribute to those who have subscribed as Library or Institution members. If you determine that your own needs would be better met with a paper copy, please subscribe in one of those two categories.

I want to thank everyone who has made my tenure as TCS BULLETIN Editor an enjoyable and educational experience. As you know, The Coastal Society entered into an agreement with the Marine Law Institute at the University of Maine Law School two years ago to re-establish quarterly publication and distribution of the BULLETIN. This issue marks the end of that two year collaborative effort. We hope that our production of the BULLETIN has served you well over that time. I would like to thank Chantal Lefebvre, Dan Hellin and Jack Wiggin at the Urban Harbors Institute (UHI) once again for lending a hand on the production of another issue of the BULLETIN.

John Duff



As The Coastal Society reflects upon more than 25 years of service to coastal communities, we would like to hear from those of you who have been involved with the organization over the years.

In the coming months and issues, TCS Bulletin will publish articles about the work of the organization and its membership (because in truth, the organization is its membership).

If you have an article that illustrates the role that TCS members have played in coastal governance, please send it along. We are also interested in articles about contemporary coastal matters. Information about upcoming conferences as well as education and training opportunity notices are always welcome. Finally, TCS Bulletin would like to highlight innovative approaches to coastal and ocean resource stewardship. If you are involved in, or know about, a truly "bright idea" that promises to improve coastal resource management efforts, let us know.

Remember, sound governance of our ocean and coastal resources wasn't just the concept behind the formation of The Coastal Society, it is a principle of historic importance.

> *He has plundered our Seas,*
> *he has ravaged our coasts...*
> *he has destroyed the lives of our people.*
>
> - Declaration of Independence, 1776

Submissions can be made to: coastalsoc@aol.com.

The TCS Bulletin is published by The Coastal Society to provide information about coastal issues and events. The Coastal Society is an organization of private sector, academic, and government professionals and students dedicated to actively addressing emerging coastal issues by fostering dialogue, forging partnerships, and promoting communication and education.

Contributions to the Bulletin are encouraged. Inquiries about the Bulletin or the Society should be addressed to:

The Coastal Society
PO Box 25408
Alexandria, VA 22311-5408
PH: 703.933.1599 FAX: 703.933.1596
coastalsoc@aol.com

NCSE Conference - forecasting Environmental Changes, Feb 3-4, 2005, Washington DC
Approaches to restore coastal ecosystems through habitat quality assessment and restoration; stock enhancement, management, restoration; and habitat remediation through watershed management.
Contact: Elaine Knight, South Carolina Sea Grant Consortium, 287 Meeting St., Charleston, SC 29401. Phone: 843-727-2078.
E-mail: Elaine.Knight@scseagrant.org . FMI: http://www.scseagrant.org.

Coastal GeoTools '05. March 7-10, 2005, Myrtle Beach, South Carolina
Coastal GeoTools is the conference series that focuses on the technical information needs of the nation's coastal programs. The goals of the conference are to promote the understanding and applied uses of geospatial data and tools for studying and effectively managing the coast and to further the goals of the National Spatial Data Infrastructure.
FMI: http://www.csc.noaa.gov/geotools/

Lobster Shell Disease Researchers Meeting. March 12-13, 2005, UMass/Boston
Scientists from the Northeast region gather together to discuss, among other things, the current state of research being conducted on lobster shell disease, its relationship to lobster biology, health issues, and the environment. Contact: Harlyn Halvorson hhalvors@mbl.edu.
FMI: http://neaq2.securesites.net/scilearn/research2/subpage.php?id=24

International Conference on Coastal Conservation and Management 2005. April 17-20, 2005, Vilamoura, Portugal
FMI: http://icccm2005.tripod.com

Solutions to Coastal Disasters Conference 2005. May 8 -11, 2005, Charleston, SC
FMI: http://www.asce.org/conferences/cd05/cd05_about.cfm

Environmental Conflict Resolution (ECR) 2005 Conference. May 24-26, 2005, Tuscon, AZ
FMI: http://www.mediusevents.com/ECR2005

International Marine Biotechnology Conference. June 7-12, 2005, St. John's, NFLD, Canada
IMBC 2005 will offer an international forum for the world's leading scientist working at the cutting edge of marine biotechnology.
FMI: http://www.imbc2005.org

National Marine Educators Conference. July 11-16, 2005, Maui, HI
FMI: www.hawaii.edu/mcc/oceania/NMEA05TS.html

Coastal Zone 05. July 17-21, 2005, New Orleans, Louisiana, USA
CZ05 will focus on balancing the issues and interests of land and sea. With over 1,000 participants expected from all over the world, this conference promises to provide valuable tools, lessons learned, and new ideas to help address the coastal management issues we're all facing. FMI: http://www.csc.noaa.gov/cz/

Dunes & Estuaries 2005. Sept 19-20, 2005, Casino Koksijde, Belgium
International conference on: Nature Restoration Practices in European Coastal Habitats.
FMI: http://www.vliz.be/de2005/

International Congress of Seas & Oceans. Sept 20-25, 2005, Szczecin-Swinoujscie, Poland
FMI: http://www.wsm.szczecin.pl/iirm/kongres/index.htm

The First International Marine Protected Areas Congress. Oct 23-27, 2005, Geelong, Australia
FMI: http://www.impacongress.org/

2005 Canadian Coastal Conference. Nov 6-9, 2005, Dartmouth, NS, Canada
FMI: http://www.ccc2005-ccl2005.ca

MARK YOUR CALENDARS! TCS's 20th BIENNIAL CONFERENCE
May 14 - 18, 2006
St. Pete Beach, Florida, Tradewinds Island Resorts

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laws such as the Clean Water Act and the Endangered Species Act as the most significant impediments to a successful industry.

Clean Water Act

In the late 1980s a number of Atlantic salmon aquaculture enterprises began in the coastal waters of Maine. The operations include the transfer of young salmon from freshwater hatcheries to net pens submerged in ocean water. Concerned that their aquaculture operations might require Clean Water Act permits for any of their "polluting" effects, the companies applied to the Environmental Protection Agency (EPA) for National Pollution Discharge Elimination System (NPDES) permits in 1990. NPDES permits effectively act as a shield against claims of Clean Water Act violations. EPA neither issued nor denied the operators' permit application. Rather, the agency embarked on a lengthy effort that ultimately led to delegation of the permitting system to the state of Maine. Meanwhile, without the permits, the aquaculture operators were relatively defenseless. That became abundantly clear in September, 2000, when an environmental organization filed suit against a number of salmon aquaculture companies to stop their operations.

The court found the companies in violation of the Clean Water Act. Ultimately two companies entered into an agreement whereby they would modify their operations to the satisfaction of the environmental organization and the court. While the consent decree governed their operations, aquaculture companies still lacked the NPDES permits that might ultimately lend some certainty to their operating requirements. Finally in 2003, the state of Maine implemented a general Maine Pollution Discharge Elimination System (MPDES) permit for Atlantic Salmon aquaculture.[1]

A general MPDES permit is applicable to a class or category of dischargers (in this case Atlantic Salmon aquaculture operators) who agree to conduct their activities in accordance with certain the conditions. The permit outlines the general as well as special conditions that apply to aquaculture facilities operating thereunder: the general conditions outline the underlying authority of the permit and contain definitions and terms related to notice and acceptance as well as the duration of applicability of the permit. The special conditions spelled out in the general permit govern:

- General Limitations
- Feeding Rates and Monitoring
- Mixing Zones
- Narrative Limitations
- Monitoring Requirements
- Reference Sites
- Impact Thresholds
- Toxic Impacts
- Protection of Atlantic Salmon
- Best Management Practices for Operation of the Facility
- Husbandry Practices
- Best Management Practices for Disease Control
- Best Management Practices for Spill Control
- Quality Assurance
- Monitoring and Reporting

Believing that the MPDES permit issuance would finally bring them out from under the strictures of the court-fashioned consent decree, the aquaculture companies sought to operate under the terms of the state permit and have the consent decree conditions lifted. Once again, however, the companies were out of luck.

In 2003, two aquaculture operators who had obtained authority to operate under the MPDES permit were enjoined from certain methods of operations even where those conditions would not violate the permit.[2] The court ruled that the more stringent provisions of the previously formulated consent decree would remain in effect to offset the harm resulting from the operators' pre-MPDES operations. The court did indicate that the more stringent provisions need not continue forever, suggesting that the aquaculture operators could seek to eliminate certain provisions of the consent decree upon a showing that previous harms had been remedied. It remains to be seen whether the companies will survive long enough to do that. At the same time, aquaculture operators are also concerned about the implications of the recent listing of certain stocks of wild Atlantic salmon in Maine's northernmost rivers as 'endangered.'

Endangered wild salmon and the salmon aquaculture industry

In June 2004, the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service published a *Draft Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon* (*Salmo salar*) in accordance with the Endangered Species Act.[3] The Draft Recovery Plan (DRP) specifically refers to concerns related to aquaculture operations in the vicinity of the distinct population segment of endangered salmon.

In pertinent part, the DRP states:

> *Regarding aquaculture, comprehensive solutions to minimize the threat of interaction between wild and aquaculture salmon have not yet been fully implemented. …*
> *The lack of regulatory measures to address and prevent escapes from aquaculture hatcheries has also been a concern.*

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Two commercial hatcheries are located on DPS rivers (Heritage Salmon hatcheries in East Machias, Maine at Gardner Lake and in Deblois, Maine), and cases of chronic and large escapements from freshwater hatcheries in Maine have been documented.[4]

And the DRP goes on to state:

The potential for interactions between wild Atlantic salmon and aquaculture escapees represents a significant threat to the continued existence of endangered salmon in Maine (65 FR 69459; NMFS and FWS 1999). Comprehensive protective solutions to minimize the threat of interactions between wild and aquaculture salmon have not been implemented… Escaped aquaculture salmon pose a significant threat to the Gulf of Maine DPS because even at low numbers they can represent a substantial portion of fish in some rivers. Aquaculture escapees have been detected annually in Maine rivers since 1990.[5]

What can be done to reconcile aquaculture operations with wild salmon protection?

The DRP suggests a number of steps to reduce risks of harm to endangered salmon from commercial aquaculture operations, including:

- Improving containment at existing and future marine sites;
- Minimizing the effects of escaped farmed salmon;
- Minimizing risks of disease and parasite transmission from farmed fish in marine pens to wild fish;
- Reducing risk of juvenile escapement from freshwater aquaculture facilities into DPS rivers.[6]

While the DRP refers to the general type of actions that can be taken to reduce the likelihood of aquaculture-related harms to endangered wild salmon, the lack of specificity is yet one more cloud of uncertainty that looms over Maine's salmon aquaculture industry.

Whether Maine's salmon aquaculture will survive is a question that remains unanswered. ❖

[1] This general permit was issued on June 19th, 2003 and can be found at: http://www.state.me.us/dep/blwq/docstand/aquaculture/MEG130000.pdf

[2] See US PIRG v. Atlantic Salmon of Maine 339 F.3d 23 (1st Cir. 2003).

[3] National Marine Fisheries Service and U.S. Fish and Wildlife Service. 2004. Draft Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon (*Salmo salar*). [hereinafter Draft Recovery Plan]National Marine Fisheries Service, Silver Spring, MD. Viewable at: http://www.nmfs.noaa.gov/pr/readingrm/Recoverplans/Draft_ATS_plan.pdf

[4] Id. at 1-55

[5] Id. at 1-57.

[6] Draft Recovery Plan at 4-51 - 4-57

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What Are Effective Dissemination Practices?

The literature is full of noteworthy studies on the process of disseminating information. The Water, Engineering and Development Centre (WEDC) at Loughborough University in Great Britain conducted one study for the International Development Community that resulted in a document series titled *Spreading the Word*. WEDC analyzed various approaches to disseminating research information and provided some enlightening analysis of common dissemination strategies used, problems and constraints experienced, and factors that establish effective dissemination. The WEDC study (1999) provided a simple working definition of dissemination as "the process of sharing information and knowledge," and suggested two factors that are critical to meeting this challenge: (1) ensuring the physical availability of research findings to as large an audience as possible, and (2) making these findings comprehensible to those who receive them. It is the implementation of these factors--the "how"--that determines if the challenge is met and whether the dissemination process is considered effective.

Several other studies looked closely at the issue of how to best transfer information in ways that will enhance the likelihood of research information being distributed, accessed, and used by those who need it. Four elements of dissemination are identified as critical in order for it to be effective (Saywell 1999, NCDDR 1996):

- Dissemination **source**, that is, the agency, organization, or individual responsible for creating the new knowledge or product, and/or for conducting dissemination activities;
- Content or **message** that is disseminated, that is, the new knowledge or product itself, as well as any supporting information or materials;
- Dissemination **medium**, that is, the ways in which the knowledge or product is described, "packaged," and transmitted; and
- **User**, or intended user, of the information or product to be disseminated.

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The American Library Association Committee on Research and Statistics (CORS) concluded that four major parties must play a role in dissemination (NCLIS 2001): (1) **Researchers** must keep in mind that unless the implications of research are communicated to practitioners, the results are of little value; (2) **Practitioners** must keep in mind that systematic attention to these findings is a professional obligation; (3) **Educators** must base course work on a diligent awareness of research findings and reflection on their implications; and (4) **Professional Associations** must disseminate results purposefully and encourage the development of communication among all those concerned.

In summary, the literature shows that an effective dissemination strategy can create meaningful dialogue between different groups. But an effective dissemination strategy does not just happen--it must be based on sound principles, shared responsibility, careful planning, and a long-term commitment--otherwise information is simply being made accessible and not effectively disseminated.

Existing Dissemination Efforts By Federal Agencies

Although the issue of federal agencies managing vast quantities of information has come under more scrutiny with the advent and growth of the digital world, there is no government-wide comprehensive policy for the dissemination of research information by federal agencies. The broader issue of information management across government agencies is addressed by several pieces of legislation, including: the Paperwork Reduction Act of 1995, the Clinger-Cohen Act, the Privacy Act, the Chief Financial Officers Act, and the Data Quality Act. Dissemination of research information is typically considered, albeit not necessarily explicitly, within the context of agency-by-agency information management plans. In the absence of a government-wide policy on the dissemination of research information, individual agencies are left to adopt their own policies and practices.

An assessment of the dissemination practices of several key federal agencies was conducted between October 2003 and March 2004. Information was obtained primarily through a review of the literature (including websites), personal contact, and standardized interviews. Approximately 20 individuals from federal agencies and independent organizations were contacted and/or interviewed. The key findings of this assessment are highlighted below.

Agency Policies
Federal agencies lack clear policy direction or guidance to their organization for coordinating an effective dissemination strategy of research information. The lack of such guidance results in duplication of effort (time, funds, products, etc) and confusion.

Funding Provisions
Agencies generally lack adequate provisions in the award of research funds to address how the research results will be effectively disseminated.

Communications
Agencies can more effectively disseminate research information by establishing integrated teams of research program staff and public affairs staff. It is necessary to have an interactive process between those who know the subject matter and those who know the delivery process.

Mechanisms for Dissemination
Effective dissemination of research information can be greatly enhanced if interactions between federal agency research programs and the coastal and estuarine management community occur at the regional and state levels.

Obstacles
The ability of federal agencies to effectively disseminate research information is constrained by:

- Lack of priority setting by the management community;
- Competing demands on agency staff time;
- Insufficient funds to sustain long-term, technology heavy commitments; and,
- Timely receipt and translation of research results.

Conclusions

The literature concerning the dissemination of information is extensive and provides a unified perspective that for dissemination strategies to be effective they need to embrace certain key elements, some of which relate to procedural requirements, others to behavioral principles. When holding these key elements up against current practices used by federal agencies to disseminate research results, the contrast is clear--multiple levels within a single organization are attempting to provide the same audience with information related to the same topics; poor staff training in the application of effective dissemination processes; and uncertainty over what the user actually needs. ❖

Tenure Track Faculty Positions University of Massachusetts Boston

The Department of Environmental, Earth and Ocean Science (EEOS) seeks two tenure-track faculty for September 2005: (1) Assistant Professor in Coastal Geology/Physical Geoscience with research focused on the coastal environment. Competency in GIS preferred. (2) Assistant or Associate Professor in either Geographic Information Technologies (GIT) or Environmental Remote Sensing Using GIS. For more information: **www.ecos.umb.edu**

Environmental, Earth and Ocean Sciences Fellowships at UMass/Boston

A number of research and/or teaching assistantships are available in the Environmental, Earth and Ocean Sciences Department at the University of Massachusetts (Boston) for qualified student applicants interested in research related to environmental science (including ocean and coastal), management and policy. Motivated individuals with experience and education in a range of law, policy and science are encouraged to apply. Fellowships include waivers of tuition and most fees and annual stipends ranging from $12,000 - $16,000 depending status and standing in the Masters or Ph.D. Program. For further information on the program visit **www.eeos.umb.edu** and link to the graduate program.

Aquaculture Biologist - University of Maine

The School of Marine Sciences at The University of Maine invites applications for an Aquaculture Biologist. This is a tenure-track, academic year position, available 1 September, 2005. Rank and salary are negotiable depending upon qualifications and outstanding candidates at all levels will be considered. We are seeking an individual with expertise in physiology, pathology, parasitology, ecology, or production-related research, preferably working with shellfish. A Ph.D. or equivalent degree in a relevant field and post-doctoral research experience are required. Send cover letter, vita, statements of research interests and teaching philosophy, reprints, and the names and addresses of three references to: Chair, Aquaculture Biologist Search Committee, School of Marine Sciences, 5706 Aubert Hall, University of Maine, Orono, ME 04469-5706. Information on he School of Marine Sciences can be found at **www.marine.maine.edu** and inquiries may be addressed to **Aqbiosearch@maine.edu** . Review of applications will begin February 1, 2005 and continue until the position is filled. Women and minorities are encouraged to apply. The University of Maine is an EO/AA employer.

Resources for the Future (RFF) has a number of fellowships and internships available.

The positions are included in five programs, each with its own application requirements and deadline. FMI: www.rff.org/rff/News/Releases/2004/RFF-Announces-New-Opportunities.cfm

POST YOUR JOB OPPORTUNITIES WITH TCS

Does your organization or institution have a job opening? Do you want to advertise it to folks studying or working in the fields of environmental, coastal and ocean science and policy?

Send your job listing(s) to **coastalsoc@aol.com**. TCS will deliver job notices to hundreds of people who are working in the fields you need to reach.

CHECK OUT ENVIRONMENTAL CAREER OPPORTUNITIES

Looking for opportunities to teach students about environmental and coastal issues?

For a look at environmental teaching jobs, check out: **www.ecojobs.com/educationjobs.htm**

NOAA/TCS HABITAT INTERNSHIPS

NOAA's National Marine Fisheries Service announces its intent to join with The Coastal Society to sponsor one or more, 2-6 month internships for TCS members. This is the same intern program that was inaugurated in 2004 with the selection of Kimberly Lellis from the University of Rhode Island. Kim is now working in Silver Spring, Maryland on the environmental effects of shellfish aquaculture, the potential applications of living shoreline strategies to protect our coastlines, and other habitat issues. The new intern(s) will work on a mix of coastal habitat protection issues that could involve some blend of:

- Policy development (e.g., working on recommendations in the Pew Commission and the President's Commission on Ocean Policy);
- Resource management (e.g., contributing to efforts to develop an ecosystem-based approach to fishery management or synthesize information related to habitat impacts and their mitigation);
- Scientific applications (e.g., using the best available science to develop strategies that will minimize the effects of specific fishing gears on selected bottom types);
- Program implementation (e.g., developing evaluation tools or performance metrics to document program success); or
- Other opportunities by mutual agreement.

Each internship will be designed as a full-time contract to work at the Office of Habitat Conservation in Silver Spring, Maryland (just outside Washington, DC) and will be supported by a stipend of about $2,500 to $3,000 per month. TCS members are invited to email a resume and cover letter to the following address by March 18, 2005. Interviews will be conducted in early April with selection by late April for an internship that will be scheduled at the mutual convenience of the host and selectee. Among the possible time frames are over the summer, during a semester, or post-graduation.

For insights on this opportunity, please read the article by Rebecca Cooper (on a similar intern experience) in The Coastal Society's Bulletin Volume 25(3-4) from 2003 (viewable at pages 10-11 of http://www.mli.usm.maine.edu/TCS25_34e.pdf).

To apply or inquire, please contact:

Tom Bigford
NOAA/National Marine Fisheries Service
Office of Habitat Conservation, F/HC2
1315 East-West Highway, Rm 14100
Silver Spring, MD 20910
(301) 713-4300 ext. 131
thomas.bigford@noaa.gov

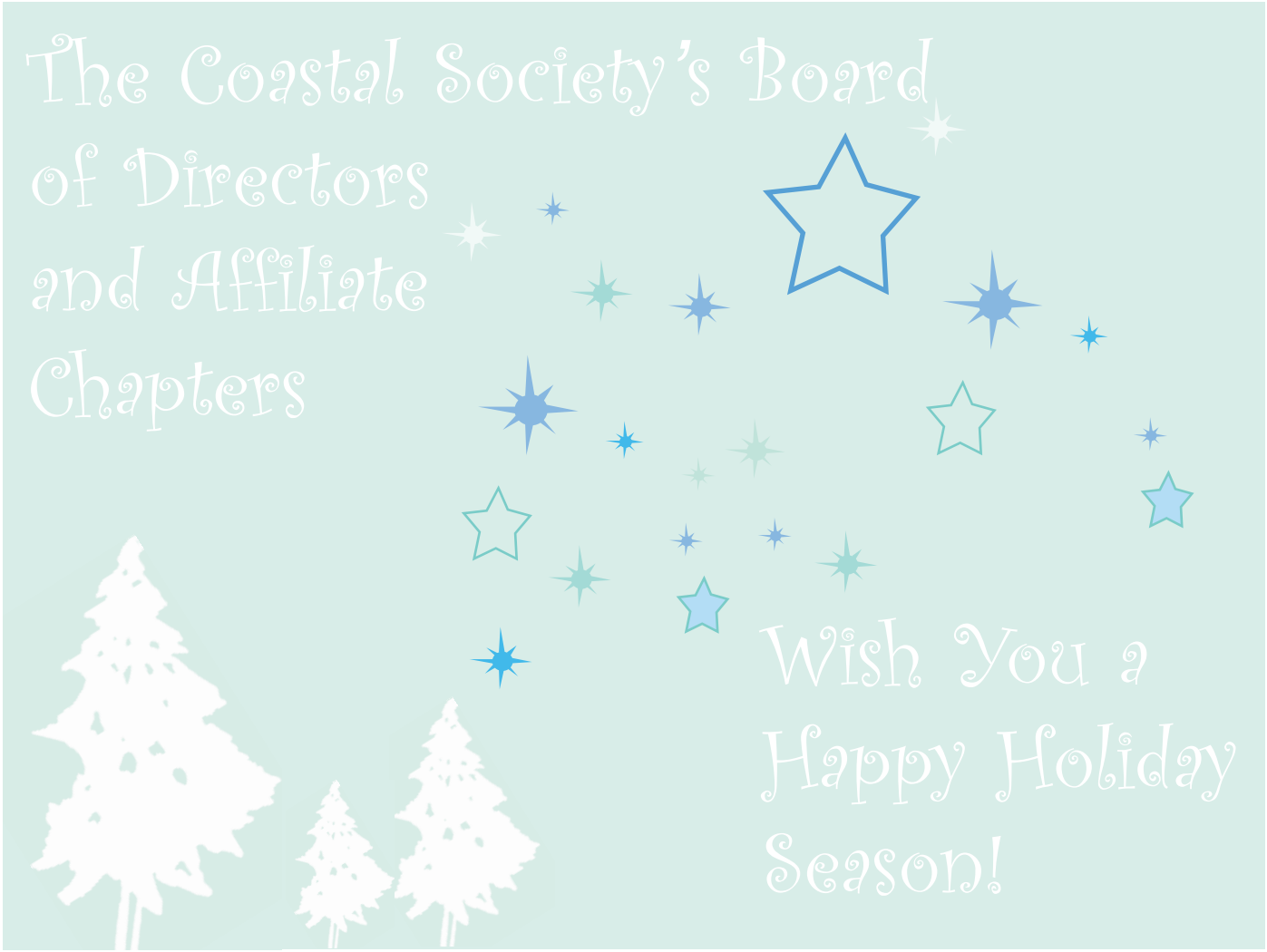
A warm welcome to our new and returning board members

The Coastal Society welcomes the officers-elect and directors-elect to the Board of Directors. The results of the Fall 2004 Election have been tallied and ratified.

Executive Committee
On January 1, 2005, **Kristen Fletcher** assumes her role for a two year term as TCS President-Elect. **Paul Ticco** moves into the position of TCS President and John Duff steps into his position as TCS Past-President. TCS Members also voted **Mo Lynch** into a subsequent term as TCS Treasurer. Those individuals join TCS Secretary **Lindsay Fullenkamp** (elected to a three year term running from January 1, 2004 - December 31, 2006) to comprise the TCS Executive Committee.

Board Members
TCS members also voted for two three-year Board member seats. **Bob Goodwin** and **Larry Hildebrand** garnered those two positions. In December, the TCS Board of Directors unanimously ratified the appointment of **Ariel Cuschnir** to the Board of Directors. Bob, Ariel and Larry join Tom Bigford, Rick Burroughs, Gib Chase, Laurie Jodice, Ruth Kelty, Chad Nelsen, Summer Morlock, Sera Harold, Clay McCoy, and Michael Conathan as Board members.

TCS thanks all the candidates who participated in the election process as well as you, the voters.



The Coastal Society
Tax ID Number: 52-1082650
www.thecoastalsociety.org

OFFICERS

John Duff (President)
Marine Law Inst.
UMaine Law School
246 Deering Avenue
Portland, ME 04102-2898
PH: (207) 228-8290
FAX: (207) 780-4239
jduff@usm.maine.edu
Term: 1/1/03 - 12/31/04

Paul C. Ticco (President-Elect)
Waquoit Bay NERR
MA Dept of Conservation & Rec.
PO Box 3092
Waquoit, MA 02536
PH: (508) 457-0495 ext. 110
FAX: (617) 727-5537
paul.ticco@state.ma.us
Term: 1/1/03 - 12/31/04
(Special Projects Chair)

Walter Clark (Past Pres.)
1811 Park Drive
Raleigh, NC 27605
PH: (919) 515-1895
FAX: (919) 515-7095
walter_clark@ncsu.edu
Term: 1/1/03 - 12/31/04
(Nominating Chair)

Maurice Lynch (Treasurer)
VA Institute of Marine Science
P.O. Box 125
Gloucester Point, VA 23062
PH: (804) 684-7151 / 642-4852
FAX: (804) 684-7120
mlynch@vims.edu
Term: 1/1/03 - 12/31/04
(Finance Chair)

Lindsay Fullenkamp (Sec)
Atlantic States Marine
Fisheries Commission
1444 Eye St, NW, 6th Fl
Washington, DC 20005
PH: (202) 289-6400
FAX: (202) 289-6051
LFullenkamp@asmfc.org
Term: 1/1/04-12/31/06
(Communications Chair)

DIRECTORS

Thomas E. Bigford
9317 Harvey Road
Silver Spring, MD 20910
PH: (301) 713-4300 X131
FAX: (301) 713-4305
thomas.bigford@noaa.gov
Term: 1/1/04 - 12/31/06
(Membership Committee Chair)

Richard H. Burroughs
Dept. of Marine Affairs
URI, Washburn Hall
Kingston, RI 02881
PH: (401) 874-4045
FAX: (401) 874-2156
rburroughs@uri.edu
Term: 1/1/04 - 12/31/06
(Education Committee Co-Chair)

Gib L. Chase
6 Kimball Lane
Northborough, MA 01532
PH: (508) 393-9548
gib_chase@fws.gov, gib5@charter.net
Term: 1/1/03 - 12/31/05

Ariel A. Cuschnir
The Louis Berger Group, Inc.
2300 N Street, NW
Washington, DC 20006
PH: (202) 912-0242
acuschnir@louisberger.com
Term: 1/1/03 - 12/31/04
(Education Committee Co-Chair)

Larry Hildebrand
Environment Canada
16th Fl, Queen Sq., 45 Alderney Dr.
Dartmouth, Nova Scotia B2Y 2N6
CANADA
PH: (902) 426-2131
FAX: (902) 426-6348
larry.hildebrand@ec.gc.ca
Term: 1/1/02 - 12/31/04

Laurie Jodice
304 Brookstone Way
Central, SC 29630
PH: (864) 656-2209
FAX: (864) 656-2226
jodicel@yahoo.com
Term: 1/1/03 - 12/31/05

Ruth Kelty
NOAA Natl Centers for Coastal Ocean Sci.
1305 East-West Hwy, SSMC4, Rm 8215
Silver Spring, MD 20782
PH: (301) 713-3020
FAX: (301) 713-4353
ruth.kelty@noaa.gov
Term: 10/1/04 - 12/31/05

Chad E. Nelsen
PO Box 6010
San Clemente, CA 92674
PH: (949) 492-8170
FAX: (949) 492-8142
cnelsen@surfrider.org
Term: 1/1/04 - 12/31/06
(Development Committee Chair)

PROFESSIONAL SERVICES

TCS Office
Judy Tucker, CAE, Executive Director
4690 Kirkpatrick Lane
Alexandria, VA 22311
PH: (703) 933-1599
FAX: (703) 933-1596
E-MAIL: coastalsoc@aol.com
HOME PH: (703) 379-7477

Tax Preparation
Swart, Lalande & Associates, PC
9300 Grant Avenue, Suite 103
Manassas, VA 20110
PH: (703) 361-6126
FAX: (703) 368-7495
crannells@slacpa.com
Chas Rannells

EX-OFFICIO BOARD MEMBERS

Cascadia Chapter President
Robert F. Goodwin
Washington Sea Grant Program
3707 Brooklyn Ave. NE
Seattle, WA 98105-6715
PH: (206) 685-2452
FAX: (206) 543-1417
goodrf@u.washington.edu

Univ of Washington Chapter Liaison
Summer Morlock
3707 Brooklyn Avenue, NE
Seattle, WA 98105
PH: (206) 543-7004
FAX: (206) 543- 1417
tcsuw@u.washington.edu
smorlock@u.washington.edu
Chapter Co-Presidents:
Jamie Doyle
Jdoyle@u.washington.edu
Carrie Bryon
Byroncc@u.washington.edu

Duke Student Chapter President
Sera Harold
Duke University Marine Laboratory
135 Duke Marine Lab Road
Beaufort, NC 28516-9721
PH: (340) 277-9234
sera.harold@duke.edu
www.env.duke.edu/students/tcs.html

East Carolina Chapter President
Clay McCoy
Coastal Resources Management Prgm
East Carolina University
207 Ragsdale Building
Greenville, NC 27858
PH: (252) 531-5190
cam0928@mail.ecu.edu

University of Rhode Island Chapter President
Michael Conathan
70 Campus Avenue #2
Kingston, RI 02881
PH: (401) 782-6874
FAX: (401) 782-6874 (call first)
E-MAIL: Conathan@mail.uri.edu

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