

**New England Ocean Science Education Collaborative
Planning Retreat
Southern Maine Community College
Meeting notes**

Wednesday December 3, 2008

Attendees: Suzy Ryan (Census of Marine Life, Gulf of Maine Area), Perrin Chick (Seacoast Science Center), Diana Payne (Connecticut Sea Grant), Catherine Cramer (COSEE New England, National COSEE Network), Pam DiBona (New England Aquarium), Justine (Gulf of Maine Research Institute), Lauren Rader (Project Oceanology), Tracy Hadjuk (Northeastern University Marine Science Center)

Welcome

Suzy, current Chair of NEOSEC, pointed out that this is good timing and a good group for looking ahead for NEOSEC.

We reviewed NEOSEC's mission: "To leverage New England's extraordinary assets to engage the public in understanding the vital connections between people and the ocean." Pam and Catherine described how this mission came to be: it is the product of a 2-day facilitated meeting in December 2005. NEOSEC was an idea that came out of COSEE NE, but was designed to be stand-alone and self-governing.

Summit debrief

Several organizations have come forward requesting information about NEOSEC membership. The group agreed that we would restrict our recruiting efforts to those who have approached us (the "low-hanging fruit"). Following that, we would use a matrix of existing members with their resources, etc. to identify missing partners. We agreed that the Executive Committee can make decisions on membership, but some work should be done to define qualifications for membership more concretely.

Budget status

Pam reported that the COSEE NE PIs have committed all funds remaining from COSEE NE's National Science Foundation grant to cover basic NEOSEC functions (Pam's coordination, meeting expenses and travel reimbursement, and *NEwswave* production) for 9 months.

Setting Goals

Attendees assembled a list of potential next steps, drawing from:

- OL Summit 2008 evaluations
- OL Summit 2006 evaluations (Some of which were pursued as committee work – specifically networking committee & ocean literacy outreach)
- Personal brainstorming – ideas that struck us from the existing list, or others: what would we, as individuals, like to see happen for ourselves and NEOSEC?

The results – NEOSEC should/could:

1. Make networking easier and more effective for members carrying out ocean programming – including information for teachers, researchers.
2. Not get caught up in the trees (e.g., individual teachers' needs), but think about the forest (i.e., the larger community's needs).

3. Use the subscriber base from NEwswave to strengthen and improve networking within the community, e.g., launch a web network.
4. Ocean technology career training – raising awareness, providing platforms for discussion and nascent partnerships.
5. Impact education more broadly and effectively, e.g., via pre-service and early-service teachers; perhaps via depts. of ed., legislatures
 - a. Support for trips
 - b. Promote interdisciplinary approaches to science
 - c. Connect teachers and scientists
 - d. Funding for memberships and attendance at meetings & conferences
 - e. Letters to chairs of education committees
 - f. Educational forums for legislators, speakers for teacher conventions, etc.
6. Promote science education research – document that science education works on a variety of levels.
7. Help get every New England K-12 student into their own watershed for a meaningful outdoor experience at least once per year.
8. Assemble a one-stop place for information about ocean science education resources in New England.
9. Provide opportunities for collaborative projects and grants.
10. At the end of the next five years, ensure that NEOSEC is stable and funded, and retains its existing (fluid) governing structure. This results in a strong reputation for the collaborative, and influence with decision-makers at all levels.
11. Ocean literate society across NE (K to gray)
12. Generate products and services that individual institutions would otherwise have difficulty obtaining on their own (research boat, evaluation consulting, technology tools).
13. Promote Ocean Literacy as a tool to teach STEM, humanities, and the arts.
14. Promote regional policy for sustaining resources (e.g., EBM [diversity in ecosystems] as a tool for that).

The group conducted several rounds of voting as individuals, voting for (n/2 +1) items at each round. The top two vote-getters identified as immediate priorities (and some first steps) were:

1. Make networking easier
 - a. Compile intra-networking programming, expertise, and resources that are available at little cost – at institutional and personal levels. We should distribute a survey to determine what we have to work with as a network.
 - b.
10. NEOSEC is still in existence
 - a. Partnering with funders – Maine Philanthropy (see Suzy’s memo on wikispace), Environmental Grantmakers of Massachusetts, other funders’ networks?

The group spent Thursday morning fleshing out these priorities and assessing potential next steps and funding sources.

Thursday December 4, 2008

Attendees: Suzy Ryan (Census of Marine Life, Gulf of Maine Area), JB Kavaliauskas (Buccoo Reef Trust), Diana Payne (Connecticut Sea Grant), Catherine Cramer (COSEE New England, National COSEE Network), Pam DiBona (New England Aquarium), Justine Glynn (Gulf of Maine Research Institute), Lauren Rader (Project Oceanology), Tracy Hadjuk (Northeastern University Marine Science Center)

Attendees worked in small groups to produce several draft documents:

A survey of NEOSEC members (distributed to Governing Council December 22, 2008)

A request for a no-cost extension of COSEE NE funding (draft final pasted below)

A list of projects that could be funded with additional monies (included in no-cost extension)

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REQUEST FOR A NO-COST EXTENSION
Center for Ocean Sciences Education Excellence New England
NSF Grant No. 0215456

We respectfully request a 1-year extension under NSF Grant No. 0215456 to continue our work, at no additional cost, through December 2009. As most COSEE New England (COSEE NE) programming will be complete as of January 31, 2009, we propose that all of the remaining funds be redirected to expand and strengthen the New England Ocean Science Education Collaborative (NEOSEC), an entity launched by COSEE NE in 2005.

PROJECT BACKGROUND

NEOSEC is a unique collaboration of institutions and networks based in New England. Collectively we represent ocean science educators (both formal and informal), scientists, and facilitators dedicated to ocean literacy. We collaborate with a spirit of inclusiveness that taps into the wealth of ocean resources in the region. Our collective mission is "to leverage New England's extraordinary assets to engage the public in understanding the vital connections between people and the ocean."

NEOSEC's strengths include:

Connectivity. With a sharp focus within New England and on ocean issues, we facilitate and support strong connections between scientists and educators. All committees include representatives from both sectors, and joint programs reflect both points of view.

Inclusiveness. Support for joint projects comes from the broad membership – funding goes directly to ensuring inclusiveness – detached funding mechanism (i.e., not funding any particular organizations' participation) for network staffing and travel promotes network cohesiveness and ability to function well as a whole. Members are invested in seeing joint efforts succeed.

Multifarious. Our member organizations bring a diversity of professional expertise, resources, geographic locale, and audiences together under a common mission which in turn is complementary to individual members' institutional missions.

Cutting-edge networking. We are using multiple tools for communication and networking: wikis, online conferencing and social networking, and an electronic newsletter.

Open Structure. We employ a non-hierarchical mode of networking and egalitarian governance structure (distributed responsibility and decision-making) that makes us flexible, nimble, and resourceful. In fact, NEOSEC is fluid by definition: "Having particles that easily move and change their relative position without a separation of the mass." (Merriam Webster Dictionary)

Collaborative accomplishments

In the past year, thanks to NSF funding (and direct contributions from our members as indicated in parentheses), we have accomplished the following:

Website. Established a new, stand-alone website [neosec.org]. (lead organizations are NEAq, COSEE NE)

Summit. Produced a second Ocean Literacy Summit, with more than 100 attendees from more than 79 institutions. Our attendees included:

- Education Policy Professional/Decisionmaker (3%)
- Education institution administrator (3%)
- K-12 Educator (29%)
- Informal Educator (10%)
- Science writer (3%)
- Scientist/researcher (13%)
- E&O Facilitator (21%)
- University professor (3%)
- Graduate student (3%)
- Other (9%)

(lead organizing institutions included BU Marine Program, Census of Marine Life – Gulf of Maine Area [COML-GOMA], Buccoo Reef Trust, Maine Coastal Program, CT Sea Grant, Project Oceanology, New England Aquarium [NEAq], COSEE New England, URI, TERC, Waquoit Bay NERR).

Outreach Campaign. Our OL Outreach Committee designed a public campaign, Ocean7 Voyage of Discovery, to promote OL among visitors to our institutions' visitors centers. We presented this plan and received valuable feedback from attendees to the OL Summit. (lead developing organizations include Seacoast Science Center, NEAq, COSEE Ocean Systems, National Undersea Research Program, Maine Coastal Program, Maine Sea Grant, Project Oceanology)

Network Analysis. Conducted a social science-based analysis of our network through *pro bono* contributions from the University of New Hampshire. That analysis resulted in a visualization of our network that we propose revisiting yearly to measure changes in our effectiveness. An attached pdf file illustrates our connectedness and demonstrates the critical role of paid staff, formal communications staff, and the network chairperson for linking distributed members.

Presentations. NEOSEC members presented overviews of the Collaborative and its work at several venues, including NSTA's Annual Conference in Boston. (presenters

included staff from Project Oceanology, CT Sea Grant, UMass Boston, Buccoo Reef Trust)

Wiki. Established a central online forum to share articles, funding ideas, and future plans. [ocean7.wikispaces.com] (lead development by COML-GOMA)

Member surveys. Developed multiple online surveys to establish joint priorities, establish members' needs, and determine the value of the network to those members. (lead institutions include Maine Sea Grant, Maine Coastal Program, COML-GOMA, URI)

Community building. In May 2008, members convened to learn about each others' programs – using seven slides (for seven OL Principles), each provided a snapshot of their work and programming related to OL.

NEwswave. As of December 5th, our electronic newsletter will have been published 22 times in the past year. Our current subscriber list includes more than 900 educators, scientists, and facilitators around the region and the country. (lead institution: COSEE NE)

Member institutions have contributed to the whole in the following ways:

Matching funds. In-kind funding for staff to contribute to the joint efforts. As one example, to produce the 2008 Ocean Literacy Summit, ten institutions committed staff time for weekly planning conference calls, a total of 600 hours (approximately \$24,000); in addition, Maine Coastal Program contributed services and materials worth \$4,000, and BUMP defrayed the cost of our BU School of Management meeting space and food.

Core network. Immediate connection with more than 500 staff in our member institutions.

Expansive audience. Collective membership and audience for potential outreach of more than 3 million people, including researchers, teachers, students, volunteers, and families across the U.S. and even internationally.

Institutional capacity. NEOSEC leverages institutional resources within the network to complement and supplement grant dollars. We share targeted audiences to enhance program participation, design expertise, and program evaluation assistance, to name a few.

In short, NSF's grant funding has leveraged substantial additional resources from the New England ocean sciences education community.

With additional funding

NEOSEC is pursuing additional funding through corporate partnerships, member contributions, and grant applications. With additional funding, NEOSEC can produce:

- **Peer-reviewed Publications.** Promote research on impact of science education, and promote ocean education research publication in peer-reviewed journals. We would begin by establishing a research agenda, convening a roundtable discussion of experts from our region. (\$10,000 PSC). To share our findings, we would coordinate submissions to peer-reviewed journals. For example, COSEE NE has already published curricula in NSTA's *Science Scope* and we maintain a working relationship with their editor. In addition, we would pursue publication in *Environmental Education Research*, *International Journal of Science Education*, *Journal of Environmental Education*, *Journal of Research in Science Teaching*, *Journal of Science Teacher Education*, and *Science Education*, for example.
- **Network Analysis.** Conduct evaluation of our network by updating and conducting further examination based on the baseline social networking analysis performed in 2008. We anticipate that this tool will enable us to identify strengths and weaknesses, as well as illustrate our success as a model for others. This application and our results would be valuable for others, not only within the ocean science community, as a publication in the *International Journal of Networking and Virtual Organisations*. (\$7,000 Consultants; \$2,000 Computer Services)
- **Shared Web Content.** Field test and promote development of cosee.net functions. Working with Sean Graham of Raytheon Web Solutions and with contributions from COSEE Ocean Systems, we propose and the National COSEE Network to take advantage of the tools developed for www.cosee.net and serve as a test case for developing and sharing collaborative website content. Initially, we envision placing a new cosee.net "widget" on each of our member sites that allow all NEOSEC members to advertise each others' events and programs. (\$5,000 to \$7,000 Consultants)
- **Additional Venues For COSEE Network Products.** We have approached COSEE Network Ocean World about using their [existing product](#) for interactive ocean literacy communication on a website (ocean7.org is reserved in our name) to complement the Ocean7 Campaign. With additional funds, we could make this site reality. (\$8,000 Consultants) We also envision providing stipends and travel reimbursement to New England educators to allow them to attend COSEE- and NEOSEC member-sponsored programming. (\$3,500 PSC Travel; \$2,500 PSC Stipends)
- **A Stronger NEOSEC Network.** Even now, we can see the need for additional staff support to expand membership; pursue additional funding; support more project-specific committees and sector subcommittees; maintain a collaborative wiki; and represent NEOSEC to other networks. (\$48,000 Salaries, Wages, and Fringe)
- **NEOSEC as an Organizational Model.** Present at NMEA and NSTA 2009 Annual Meetings. (\$4,000 PSC Travel)
- **Stronger Regional Institutions.** Serve as a catalyst for regional capacity-building, for example, assisting MME, SENEME, and GOMMEA to establish a one-stop electronic membership system. (\$4,000 Consultants)