



## Coastal America Partnership Meeting on Improving Ocean Literacy Through the Federal/CELC Partnership

June 8, 2012 / Smithsonian NMNH, Washington, DC  
*(in conjunction with World Ocean Day 2012)*

**Meeting Minutes, Outcomes & Next Steps**  
**10:30 am – 12:30 pm**

### **Participants:**

#### **Federal Partners (National):**

Mary Beth Brandreth, U.S. Army Corps of Engineers  
Ralph Cantral, Office of Coastal Resource Management, NOAA  
Atziri Ibanez, Estuarine Reserves, NOAA  
Lousa Koch, NOAA Education Office  
Marlene Kaplan, NOAA Education Office  
Jill Karsten, National Science Foundation  
Trish Mace, Smithsonian NMNH  
Michiko Martin, National Marine Sanctuaries, NOAA  
Karen Richardson, Commission for Environmental Cooperation/NAMPAN  
Jeff Stoub, Commission for Environmental Cooperation/NAMPAN  
Ann Tihansky, Office of the Secretary, Interior  
Lauren Wenzel, Marine Protected Area Center, NOAA

#### **Learning Center Partners:**

Steve Coan, Mystic Aquarium  
Dolf Dejon, Vancouver Aquarium  
Jerry Enzler, National Mississippi River Museum and Aquarium  
Joe Harber, National Aquarium  
Kelly Matis, Mystic Aquarium  
Andy Rossiter, Waikiki Aquarium  
Angela Wenger, Adventure Aquarium/NJAAS

#### **Special Guests:**

Bill Mott, The Ocean Project  
Katie Pofahl, Sea Studios  
Jim Toomey, Sherman's Lagoon

#### **Coastal America Staff:**

Carli Bertrand  
Ellen Gordon  
Juliana Miller, NSF

Virginia Tippie

### **1. Introductions/Overview:**

Steve Coan welcomed participants to a session on improving ocean literacy as a part of the World Ocean Day event at the National Museum of Natural History. To start off the session, Coan summarized the work of Coastal America as an important partnership made of 3 crucial pieces: interagency collaborations, a learning center network that collectively reaches millions through interpretive exhibits and informal learning methods, and a business community. He expressed the importance of thinking differently about how we approach issues in order to connect the American public with the coastal community.

Virginia Tippie presented a summary of CELC network-wide activities highlighting 1. Ocean Interpretive Stations Initiative (Ocean Today Kiosks & Command Centers); 2. Youth Programs (Student Ocean Summits & Student Ocean Art Contests) and 3. Outreach Efforts (NAMPAN videos, CZ11 webcast, Coastal Conversations). She noted that one of the objectives of today's discussion is to determine how we can effectively use this network to improve ocean literacy.

The facilities within the CELC network are all well trusted by the general public and great opportunities exist, but the network needs support from the federal partners. The legal mechanisms are all in place for the federal partners to work collaboratively with the network. A good example of this collaboration is the new Ocean Command Center at the Mystic Aquarium, which is providing public access to real-time information and interaction with scientists at sea. It is also important to see the "payoff" after programs are complete and document it. We saw a significant benefit after the 2011 Student Ocean Summit with students continuing to activate and mobilize efforts. The National Ocean Policy now makes this a very unique time for us to try and address ocean literacy issues and advance the nation's educational objectives. Let's think about how we can do this and where we are going.

### **2. CELC Network Wide Projects – Next Steps**

Jerry Enzler discussed how important it is to reconvene on a regular basis to keep evolving new ways to attract an audience and to address important messages. The members of the CELC are eager to collaborate with people within their regions as well as with the federal government. The learning centers can learn from each other when they meet and then can bring back the lessons learned in order to inspire the programs. The art contest partnership with the CELCs works because the entries are picked up and promoted regionally. Jerry also made a suggestion to refer to the Ocean Interpretation Stations as OIS because acronyms make you sound important and they put out a unified message. When visitors feel that they are part of a nationwide effort, they are more likely to be involved. The long range plan for the interpretation centers is to go beyond having new technologies/exhibits and also have interns and docents to staff them. There is also continued interest in hosting "coastal conversation" or forums on specific issues at several learning centers in a specific time frame (e.g. issues/topics such as coastal marine spatial planning, climate change CMSPs). The basic concept is to get timely information to the public in an engaging way and involve concerned citizens in the policy dialogue.

### **3. A Vision for Improving Ocean Literacy**

Louisa Koch from NOAA discussed the next generation of science standards. About a year ago NRC, NSTA, and AAAS published a new science framework. Recently Achieve published a new set of common core standards with 24 states participating. There is a lot of momentum with these standards. The standards are focused on real world issues. However there is still work to do in developing the standards, adding important topics that were left out in the first draft – including ocean science. The standards make it easier to bring the real world into the classroom. This is a good shift and a good entry point for making progress in k-12.

Another small but important effort Louisa discussed were green ribbon schools. Blue ribbon schools recognize academic achievement. The blue ribbon program is a well established and respected program. The Green ribbon schools program was started this year to recognize environmental-minded schools. The green ribbons recognize schools that teach about environmental literacy, include ocean programs, and also the environmental contributions of the facility.

Bill Mott and the Ocean Project is an important resource for ocean education. He shines a light onto public opinion and lets the community know where we are with ocean literacy including what strategies are working. He has a focus on ocean acidification as well as the impact of social media on ocean literacy.

Social media is a powerful tool. It is important to figure out how to use social media in conjunction with the aquariums. One way to do it could be to tell a story of an individual animal perhaps giving that animal its own twitter feed. People need a personal connection to something to take action and care about it.

### **4. A Long Term Strategic Plan for Ocean Literacy**

Steve Coan took a moment to remind everyone how far ocean literacy has come. Ten years ago the Office of Education didn't exist within NOAA and there was no coordinated educational outreach at all. Twenty years ago the first generation of standards came out with zero focus on ocean science; taking into account ocean issues at all is a huge accomplishment. Additionally, sanctuaries are a big advancement as well – they used to be a small program within NOAA, but come a long way as we've developed a better understanding of MPAs. Jerry Enzler's work on the Mississippi River is revolutionary because he insists that the river systems be thought of as part of the oceans. Now in order to advance, we want a coordinated approach with the learning centers and must find ways to make the standards more user -friendly for teachers so that they can be more creative. Particularly with ocean science, these topics must be infused into the standards, not left as secondary topics.

A list of issues and opportunities that should be tackled was developed:

- Ocean acidification and ocean project issues
- Social media
- Science standards
- Inspire educate

- Focus on youth (13-25 year olds) according to market study – they are more aware and concerned about environmental issues and the parents of this age group will listen to their kids – activates kids and parents.
- Focus on English as a second language households – they are voting for political candidates based on environmental records.
- Online activities should be backed up by onsite activities – have a theme linking them.
- Provide people with solutions up front so they don't need to understand everything immediately – increase ocean literacy by providing actions up front.

Research has found that the public trusts the aquariums but they don't think anything is wrong with the ocean. Bill Mott points out that the “fuzzy animal thing” is critical in capturing people's attention. Aquariums need to provide solutions for conservation issues – if they don't, then the public will go somewhere else to get the information and they will go to the wrong place (e.g., Exxon and Shell).

Jill Karsten: research has shown that the younger generation wants to be co-creators of their knowledge. The emotional connection isn't sufficient because they need to be engaged in inquiry- type experiences. Self-discovery engages and educates them. Virginia : these kinds of programs exist in some of the Learning Centers now.

Some aquariums are developing campaigns where the youth create the program, naming and running entire events at the facilities. An example of this is the Seattle Aquarium, which allowed the public to run a WOD campaign.

Lauren Wenzel: MPAs and aquariums could be a great partnership – the trust of the aquariums and the location of the MPAs would make for great learning opportunities. She would like to foster some regional collaborations when she meets with the various MPAs.

Ann Tihansky mentioned the Live Dive program in Channel Islands which could be done nationally. It would give people around the country the opportunity to see under the ocean and to interact with a dive ranger who hooks up with students in classrooms.

Katie Pofahl explained that the currency on social media is content. The focus needs to be: communication to social media, e.g., a live feed, but also recording it and then posting it elsewhere online. Many zoos and aquariums already have amazing social media feeds.

Virginia Tippie expanded on that idea, suggesting a central spot for all learning centers to post and access content. Dropbox and FTP sites were both discussed. This would be a place to store the NAMPAN films as well.

Ann Tihansky really emphasized the power of the media, stressing that a lot of energy should be put towards that. It requires a lot of organization and work and therefore a media committee should be developed. Sharing and producing resources is demanding. Facebook, YouTube, Twitter could all be modes of outreach – make viral videos or an ocean app.

**Action: Establish a media committee comprised of CELC and government representatives.**

Katie Pofahl pointed out that the social media network is its own type of media. One can't just put anything on there – there needs to be some tweaking by someone with media training. It is a critical step to get it to someone who has an understanding of how these websites work. Need someone who has those skills. This type of networking is a way to reach audiences who wouldn't otherwise be paying attention. Carli Bertrand mentioned that packaging is important. How the information is presented needs to be based on the intended audience.

Trish Mace stated that the information is also packaged differently depending on the type of media. You can only go so far in terms of discussing the science. Going into detail is not always the best idea because then certain audiences are left out. Examples include the art contest or dance program held at Smithsonian which reached a broader audience than just the scientists. It allows for people to be involved without having a science degree.

Dolf Dejon, reminded everyone that content is king. He believes the group should try to find new ways to feed the original content. He also stated that the stories are what get the people engaged. The tsunami provided a good opportunity to engage the public about ocean issues. How does a group like this get a step ahead to put material on the table that people haven't heard before as well as get away from the regular rhetoric? Get multiple contacts so people encounter the core message frequently, because repetition is part of the game.

Angela Wenger, from Adventure Aquarium & NJAAS, the newest CELC, thinks the ocean today kiosks are great and is also very interested in the concept of Coastal Conversations. She thinks a series of small podcasts would be a new way to engage the public about issues. She also suggested the use of awareness campaigns and citizen science that could be done on a bigger scale.

Dolf Dejon and Steve Coan both emphasized the need for action, questioning what needs to happen in order to move someone from the point where they are a visitor to where they are an advocate.

Michiko Martin explained a 2 week intensive interaction with the environment that her program does for kids. It changes their views, values, and beliefs about the oceans --but it is expensive. She suggests potentially shorter, 1 hour interactions that contribute to an overall effect. Try to make the emotional connection; move away from just giving the public the science, because that doesn't really get them to connect. Data shows that film, music, and the arts have an impact. It is also important to have a connection with the MPAs. An example is with the Tennessee Aquarium staff and docents. They were brought to Flower Gardens Sanctuary and taught about the organisms in the environment – this way the staff has the connection; when they are on the floor at the Aquarium, their passion flows from the connection they made. Another example, from the California Academy of Science is their system science program. The staff and docents are trained to take the students out to the field to collect data from the rocky shores. This kind of thing helps local museums and science centers build a connection with the environment. Lauren Wenzel can help make the connections with the local MPA partners.

**Action: Connect the MPAs with the learning centers to help give staff experience in the field.**

Jill Karsten said that focusing programming on visitors only preaches to the choir because they already care. We must think of creative ways to reach the other audience that isn't part of the local communities.

Trish Mace addressed the issue of keeping the spark of interest alive after the visitor has left the museum. E.g., how do we connect DC visitor population after they go home?

The follow-up actions were recapped and action items were determined. English as a second language should be a consideration throughout all the action items. Also suggested was potential branding in order to have a common theme (like "Got Milk") across the whole network.

**1) Social media and communication**

- a. Create a working group that contains Learning Center and federal representatives and maybe representatives from appropriate business communities
- b. Establish link to the Ocean Project and specific pilot projects to measure the effectiveness
- c. Shared place for sharing media among the groups
- d. How can we be connected via Facebook/Twitter/etc so when one group has something neat to share, we can help promote? What can we do to make things go viral (videos)?
- e. Everyone be Facebook friends with each other

**2) Youth**

- a. Have some Coastal Conversations focus on just reaching youth and call them rap sessions. Tie the topics into what is being discussed with the student summit.
- b. National Ocean Science Bowl? Explore ways to connect with them.
- c. Expand the Ocean Guardian programs into other institutions. Other similar programs exist like "Hey that's my river" that are similar. Community owning their space.

**3) MPAs – connecting the Learning Centers with MPAs**

- a. Ocean Guardian from above action item
- b. Learning Centers could adopt an MPA formally.
- c. Highlight the MPAs that were in the series of videos – promote link to these MPAs and CELC. Maintain a spatial link to the MPAs and Learning Centers using Google earth

**4) Making better emotional connections**

- a. Inspiring ocean stewardship.
- b. Get them interested in one critter at the aquarium then make it a general following for that specific species.
- c. Use Google earth/ocean in a coordinated big picture way. Develop a strategy.
- d. Creating content and sharing

**5) Consistent messaging and Branding**

- a. Contest with guiding principles about what we want to capture.
- b. Add topic to the monthly call
- c. A working group can come up with the key msgs that want to send to visitors. Use essential principles of ocean literacy.