

## **Long-range Outreach and Education Plan for the GCOOS-RA**

### **Version 1.0 April 2014**

This Outreach and Education (O/E) long-range plan is designed to guide the outreach and education strategy and actions of the GCOOS-RA. The Outreach and Education Coordinator and the Outreach and Education Council (OEC) have primary responsibility for implementing O/E activities. The Outreach and Education Coordinator reports to the Executive Director of the GCOOS-RA

The overarching goal of the O/E plan is to build resilient ocean-literate, climate-literate, and energy-literate Gulf communities using the data and products available through a comprehensive and sustained Gulf observing system. Specific goals, objectives, and actions are identified by year. However, not all identified goals, objectives, and actions may be implemented in the year identified, because activities must be linked to available resources and opportunities. This plan is intended to be an evolving document that will be reviewed and updated annually within the regular GCOOS-RA planning process.

*The Vision for GCOOS Outreach and Education* is to empower regional user communities and residents to be knowledgeable about and effectively use GCOOS data, products and services when making decisions concerning their work, play, and life in the ocean and coastal waters, estuaries and watersheds of the Gulf of Mexico.

The *GCOOS Outreach and Education Council* (OEC) will provide the guidance and leadership essential (1) for the development of programs and materials designed to address regional needs for education, outreach, and public awareness of coastal, ocean, climate, and energy issues of the residents of the Gulf of Mexico region and the nation, and (2) to foster the understanding of such programs and materials by the GCOOS-RA O/E user communities.

#### **Goals [Areas for Improvements]**

1. Maintain and enhance a GCOOS outreach and education network in the Gulf of Mexico region.  
*Issue.* The audiences now reached by GCOOS are quite limited.  
*Issue.* There is a need to increase diversity within the network.
2. Enhance communication within the GCOOS-RA and its partners  
*Issue.* Not all GCOOS-RA groups make efforts to provide guidance for outreach and education activities and not all partners deliver consistent messages regarding GCOOS.  
*Issue.* Many GCOOS-RA partners are not aware of the value of GCOOS-RA communications as a tool to raise awareness of their programs.
3. Enhance the production and use of information provided by GCOOS.  
*Issue.* The current use throughout the region of GCOOS observations, products and services is limited.  
*Issue.* End users need to be informed about and trained in the use of GCOOS observations, products and services.

4. Educate teachers and students about careers related to ocean observing systems and provide training opportunities to develop the skills needed to support the ocean observing system enterprise.  
*Issue.* Most educators are unaware of the opportunities GCOOS offers for teaching or for careers.  
*Issue.* There is no data delivery platform suitable for broad education use.
5. Evaluate GCOOS Outreach and Education activities  
*Issue.* The GCOOS-RA management and the OEC do not know whether our O/E activities are meeting targeted needs or are effective.
6. Increase funding for GCOOS-RA O/E activities  
*Issue.* Support has been limited essentially to 10% of the GCOOS-RA budget. Additional funds are needed.

### **Milestones [Timeframes for needed actions]**

#### **Goal 1** “enhance network” [Lead responsible party: O/E Coordinator]

- 2014
  - Attend at least two venues where potential new network partners can be engaged (e.g., Fishery Council meeting, National Science Teachers Association conference, international, regional and state boat shows, fishing tournaments, Boater Safety Classes at West Marine, Power Squadron or Coast Guard Auxiliary).
  - Create appropriate literature to distribute to the targeted audiences.
  - Publish an article in a fishing/boating/outdoor sports magazine showcasing GCOOS data.
  - Continue organizing and participating in events such as Spooky Science, hosted at Title 1 Schools and programs with a majority of underserved students.
- 2015
  - Attend at least two venues where potential new network partners can be engaged and create targeted literature.
  - Publish an article highlighting GCOOS products and services in a recreational sport or trade magazine.
  - Continue to develop and participate in community science events.
  - Post to the GCOOS web site presentations that council, committee and task team members can use to promote the GCOOS-RA. It is envisioned there would be several versions to target specific groups (e.g., fisheries, ports, oil and gas industries, tourism, restoration, education, emergency response).
- 2016
  - Attend at least two venues where potential new network partners can be engaged and create targeted literature.
  - Publish an article highlighting GCOOS products and services in a recreational sport or trade magazine.
  - Continue to develop and participate in community science events.

#### **Goal 2** “enhance internal communications” [Lead responsible party: O/E Coordinator]

- 2014
  - Use the GCOOS newsletter and web site banner stories to more effectively share activities of the GCOOS-RA councils, committees, and task teams.
  - Arrange for quarterly communications with the GCOOS PSAC Chair to discuss stakeholders to target and their product needs.

- 2015 • Work with GCOOS-RA council, committee and task team members to determine if each needs its own brochure/flyer highlighting its work. If so, draft appropriate literature. Create a process to track GCOOS-related activities of council, committee and task team members.
- Consider developing a short survey to identify activities, audiences, numbers of participants, and impacts/outcomes of the activities. Many of these activities enhance the GCOOS-RA network, but we are unaware of them.
- 2016 • Evaluate actions from 2014 and 2015 and continue implementing those that are successful.
- Determine whether site visits to partner institutions are warranted to build relationships, add photos to the GCOOS digital library, and gain a better understanding of the work, programs and issues of RA partners.

**Goal 3** “Enhance production and use of information provided” [Lead responsible parties: O/E Coordinator, Data Manager]

- 2014 • Build additional Citizen Scientist capabilities to the website. Add data and story maps from two new volunteer data providers.
- As the GCOOS Integrated Water Quality Network (IWQN) evolves, incorporate the use of IWQN data into the Citizen Scientist resource.
- Promote and extend the accessibility of the GCOOS *Eco Hero* game.
- Use GCOOS products in formal and informal education settings (e.g., Lionfish Time Series map for National Invasive Species Awareness Week activities; Recreational Boater pages for National Safe Boating Week activities).
- Continue participation in national and state science coordination meetings to raise awareness and use of GCOOS products by emergency responders.
- 2015 • Add data and story maps from two new volunteer data providers. Add supporting information to the Citizen Scientist pages that enable users to share and compare data across the region.
- Create a process to select (semi-annual) an *Eco Hero* from a volunteer Citizen Scientist partner.
- Develop a tutorial to facilitate use of the Recreational Boater web pages.
- Write a joint proposal (e.g., with Khan Academy personnel) to expand use of GCOOS data in the global formal education arena.
- Participate in national and state science coordination meetings to raise awareness and use of GCOOS products by emergency responders.
- 2016 • Add data and story maps from at least two [2] volunteer data providers. Develop a tutorial to facilitate use of the Citizen Scientist web pages.
- Facilitate an inter-state middle- or high-school science fair project focused on water quality that is a collaboration of Citizen Scientist participants.
- Identify partners and seek funds to develop educational games that incorporate data and information from GCOOS and the U.S. IOOS. Included for consideration are electronic games, board games, and possibly engineering-type building activities.
- Work with the GCOOS DMAC and PSAC teams to develop a product of value to national and/or state emergency responders.

**Goal 4** “workforce training” [Lead responsible party: O/E Coordinator]

- 2014 • Engage in the classroom and at educator workshops to ensure GK-16 students and teachers are aware of GCOOS as a platform for teaching and learning science, technology, engineering and math (STEM), as well as an opportunity for a professional or vocational career.
- 2015 • Seek funds to offer pre-service teacher and professional development opportunities for formal and informal educators.
  - Participate in venues such as the National Marine Educators Association Annual Conference to raise awareness of GCOOS resources for STEM education.
- 2016 • Identify collaborators and seek funds to offer hands-on training opportunities for educator summer internships, and student and pre-service teacher field opportunities.

**Goal 5** “evaluate O/E activities” [Lead responsible party: Executive Director and O/E Coordinator]

- 2014 • Issue pre-and post-tests and Likert-scale-type evaluations for GCOOS O/E programs targeting students and educators.
  - Ensure that the cost of an external evaluator is included in funded O/E programs.
  - Google Analytics should continue to be used to determine use of the information on the O/E web pages.
  - For GCOOS-RA outreach to stakeholders, conduct post-workshop evaluations (e.g., electronic audience polling system) after each meeting.
- 2015 • Develop a method to acquire and process the tracking information collected on each of the *Eco Hero* kiosks. There should be clearly written instructions to participating institutions on the information needed (ideally a template provided) and a reporting schedule (e.g. once or twice per year). The information should be made publicly available on the GCOOS web site.
- 2016 • Implement a variety of evaluation tools for GCOOS O/E programs and products.

**Goal 6** “increase funding” [Lead responsible parties: O/E Coordinator, Associate Executive Director and Executive Director]

- 2014 • Leverage the \$1000 Duke Energy grant by submitting a Bay Mini Grant proposal to the Tampa Bay Estuary Program.
  - Apply for NOAA, EPA, NSF and other local, state and federal grants for formal and informal education.
  - Seek funds from foundations with an environmental education component in their missions.
  - Engage a number and variety of programs in grant applications.
- 2015 • Apply for NOAA, EPA, NSF and other local, state and federal grants for formal and informal education.
  - Seek funds from foundations with environmental education and community components in their missions.
  - Share GCOOS O/E products and activities with coastal education groups.
- 2016 • Apply for NOAA, EPA, NSF and other local, state and federal grants for formal and informal education.
  - Seek funds from foundations with environmental education and community components in their missions.