

Our Changing Ocean: Science for Strong Coastal Communities

Humans have long been drawn to the coast. Shorelines provide access to food, transportation, inspiration, and opportunities for exploration. However, the desirability of coastal living leads to mounting pressure on the very resources that make it so attractive. Escalating populations, erosion, more frequent flooding, development, storm impacts, and pollution are among the stressors that impact the protection, economic revenue, security, food, and healthy recreational opportunities provided by our nation's coasts. Coastal communities need to adapt and plan to preserve the way of life and the natural resources they value.

The North Carolina coast exemplifies the risks and rewards of coastal living. It is lined with barrier islands, which protect highly productive and valuable, yet delicate, estuaries. Known for its wide expanses of beachfront, the coast is also a major tourist destination, vulnerable to storm impacts, changing sea level, development, and pollution. With this in mind, the East Coast Barrier Islands are the perfect setting for the 2016 National NOSB Finals, hosted by University of North Carolina-Chapel Hill's Institute of Marine Sciences, Carteret Community College, and Seahorse Coastal Consulting.

Our "***Our Changing Ocean: Science for Strong Coastal Communities***" theme includes many science disciplines and will encourage increased awareness and understanding of topics such as:

- Coastal erosion and restoration
- Estuarine ecosystems such as marshes, seagrasses, mangroves, and oyster reefs
- Impacts of recreation & development on water quality
- Policy related to coastal protection, resilience, and communities
- Improving coastal environmental hazard mitigation
- Science behind coastal planning and adaptation

The theme encompasses all major STEM areas: physical oceanography, including storm prediction and mapping; chemistry, particularly effects on offshore water quality; geology, of natural formation of barrier islands and coastal erosion; biology and ecology, of shorelines as crucial marine habitats; and technology, creating tools needed to be a weather-ready nation. As approximately 39% of the U.S. population inhabits coastal regions, we need to understand our impact on the coasts and how to better protect our communities. Informed students and citizens can mobilize and lead our country to more sustainable development and to long-term solutions for the protection, restoration and enhancement of our coasts.

2016 Regional Bowls: **February 6 and 27, Across the Nation**

2016 National Finals: **April 21 – 24, Morehead City, North Carolina**



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