



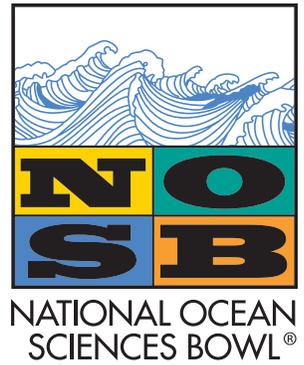
NATIONAL OCEAN  
SCIENCES BOWL®

Observe the Ocean  Secure the Future

2019

The majority of our global ocean remains unexplored, yet we know it's changing at a time when its role in supporting life on our planet is becoming more transparent every day. As these changes impact every aspect of our society, our need for information on ocean patterns, conditions, and processes is growing exponentially. High-quality data is critical for understanding ecosystem health, biodiversity, climate change, pollution, human health, maritime safety, and food, water, and energy security.

Humans have measured ocean properties since the earliest explorations by James Cook, Charles Darwin, and Edmund Halley using crude instruments. This was – and remains – no easy feat as the ocean is vast and deep. Today, scientists use sophisticated technologies including remotely operated satellites, drones, robots, and radars and in-situ platforms like ships, buoys, tide gauges, and tagging marine species. However, bringing all of this collected data together for use in a standardized way has brought about a new challenge. Ocean experts in government, academia, and industry are working to address this wealth of collected data so that the data can be used together by a growing number of users. The Consortium for Ocean Leadership facilitates ocean observing programs and has selected this topic for the 2019 NOSB to help raise awareness of the important work being conducted by its partners and stakeholders.



**Observe the Ocean; Secure the Future** includes many science disciplines and will encourage increased awareness and understanding of topics such as:

- How ocean observing addresses societal needs
- Technologies and instrumentation that make observing possible
- Challenges in processing, analyzing, and coordinating immense amounts of collected data
- How ocean observations influence/inform decision makers
- Organizations and groups focused on ocean observing
- Policy related to ocean observing

2019 Regional Bowls: **February 2, 16, & 23**, *Across the Nation*

2019 National Finals: **April 11 – 14**, *Washington, D.C.*

Please visit **[www.NOSB.org](http://www.NOSB.org)** for more information.